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**AUTOMOTIVE  
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OF GREAT BRITAIN  
AND IRELAND**

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JULIUS KLEIN, Director

TRADE PROMOTION SERIES—No. 63

**AUTOMOTIVE  
INDUSTRY AND TRADE OF  
GREAT BRITAIN AND  
IRELAND**

BY

**WILLIAM M. PARK**

American Trade Commissioner, London



PRICE 15 CENTS

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UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON

1928

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## FOREWORD

Great Britain ranks high as a producer and also as a consumer of motor vehicles. In 1927 the British industry produced approximately 231,000 automobiles.

Although Great Britain has given tariff protection to its own industry, American motor-vehicle sales are registering splendid progress, and cars of United States manufacture lead in popular demand among all imported makes. There were 31,378 motor vehicles, valued at \$20,823,000, imported into Great Britain during 1927 (allowance made for 1,296 units reexported). About 28 per cent of these units and 32 per cent of their value represent imports from the United States.

During 1923 the value of our automotive exports to Great Britain and the Irish Free State was \$11,316,214, and in 1924 they increased to \$12,333,183. In 1925 the McKenna tariff of 33½ per cent was imposed on passenger cars, replacement parts, and accessories, and in 1926 the same tariff was applied to commercial vehicles. During 1925, 1926, and 1927 the value of these exports to Great Britain and the Irish Free State was \$27,316,525, \$15,601,061, and \$20,673,588, respectively, showing that our automotive exports to these countries, despite the tariff handicap, increased about 83 per cent from 1923 to 1927.

The output during 1927 of the five branch American automobile plants located in England and the Irish Free State, where full assembly operations are carried on, was 26,436 automobiles.

This bulletin, by Trade Commissioner William M. Park, is intended as a guide for the American manufacturer to a better understanding of the conditions which surround the manufacture and distribution of automotive products in the British Isles.

The Automotive Division of the Bureau of Foreign and Domestic Commerce maintains close touch, not only with the British automotive market, but with markets for automobiles and accessories throughout the world, and will gladly reply to specific inquiries from American manufacturers and exporters.

JULIUS KLEIN, *Director,*  
*Bureau of Foreign and Domestic Commerce.*

MARCH, 1928.

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## AUTOMOTIVE INDUSTRY AND TRADE OF GREAT BRITAIN AND IRELAND

### INTRODUCTION

Great Britain, comprising England, Scotland, and Wales, is the second largest automotive market in the world. The country covers an area of 88,136 square miles and has a population of 43,500,000. With the exception of the United States, more automotive vehicles are now manufactured and sold in Great Britain than in any other country, and registration figures for the last few years show approximately 100,000 new passenger cars put into service each year. The number of trucks and other commercial vehicles have greatly increased, but the rate has been proportionately slower than in the case of passenger cars.

REGISTRATION OF PASSENGER CARS AND COMMERCIAL VEHICLES IN GREAT BRITAIN

Year	Passenger cars	Trucks	Hackneys (including taxicabs, busses, and other public-hire vehicles)
1913.....	68,000	37,000	32,000
1919.....	71,000	38,000	47,000
1924.....	474,000	210,000	94,000
1925.....	580,000	232,000	99,000
1926.....	686,000	260,000	101,000
1927.....	778,000	278,000	96,000

England is known as the home of the motor bus, and it is not surprising, therefore, to observe that a tremendous development in the manufacture and use of motor omnibuses and coaches has taken place. Motor cycles also occupy an extremely important place in the British automotive market, and their production and use in Great Britain exceed the figures for any other country.

In the past, United States manufacturers have found a substantial outlet for automotive products in the British market, where American cars and trucks enjoy a high reputation for quality and reasonable price; and the present market may be regarded as a good one, although importation of automotive products in general has declined as domestic production increased, and competition is rapidly growing more keen.

### IMPORTANCE OF THE INDUSTRY

As stated above, Great Britain ranks second only to the United States as an automotive producing and consuming country. Although British engineers were among the first in the field in car

manufacture, the principal development of the British motor industry has taken place since the World War. To-day the industry occupies a position among the major industries of the country and on its manufacturing side ranks first in importance among the engineering trades. Its growth has followed closely similar lines in the United States, but with the important difference that the import trade has played a major rôle and car design has been tremendously influenced by taxation methods and consideration of operating and upkeep costs.

#### GOOD ROADS

It is undoubtedly true that no other country has lent itself more easily to motor development. In the United States the thousands of miles of surfaced roads which now exist have been the outcome of development of the automobile. In Great Britain good roads already existed, inviting the motorist to make use of them. It is commonly stated that the British roads are among the best in the world, considering the country as a whole. A number of old Roman roads still exist and are in use, while some of the modern roads and highways are built over the old Roman roads, the latter making an excellent foundation for the new construction. The total road mileage is in excess of 178,000 miles, an impressive figure in view of the relatively small area of the country. Of this mileage more than 24,000 miles, or 13.65 per cent, are listed as Class I, or main trunk roads, and nearly 15,000 miles, or 8.4 per cent, as Class II roads, which link the Class I roads with urban areas.

#### CLIMATIC CONDITIONS

Another feature which has favored the development of motoring is that of climate. Although Great Britain is famous for its continuous rain, drizzle, and fog, the climate, on the whole, is equable in so far as there occur no great extremes of either heat or cold, 48° F. being the mean average temperature throughout the year. Snowfall in southern England is particularly light and is not sufficiently severe in northern England, Wales, Scotland, or Ireland to present serious difficulties to motoring. Fogs during the winter months are regarded as the principal menace, but their frequency and intensity have tended to decrease during the past 10 or 15 years. This is particularly true in London and some of the larger cities where attention has been given to smoke abatement. It is true, of course, that many car owners in Great Britain lay up their cars during the wet and foggy winter months, but this practice is influenced as much by the desire to avoid taxation during that period as on account of unfavorable weather conditions. During the fair-weather months of the year motoring in Great Britain is a sheer delight, and the Englishmen's well known love for outdoor sports and recreation is unquestionably another important factor in the development of the domestic automobile industry.

#### PURCHASING POWER AND STANDARD OF LIVING

A third and even more important consideration directly affecting the industry is that of purchasing power and standard of living. Unlike some other countries and less important automotive markets, the purchasing power of Great Britain is not to be gauged by any

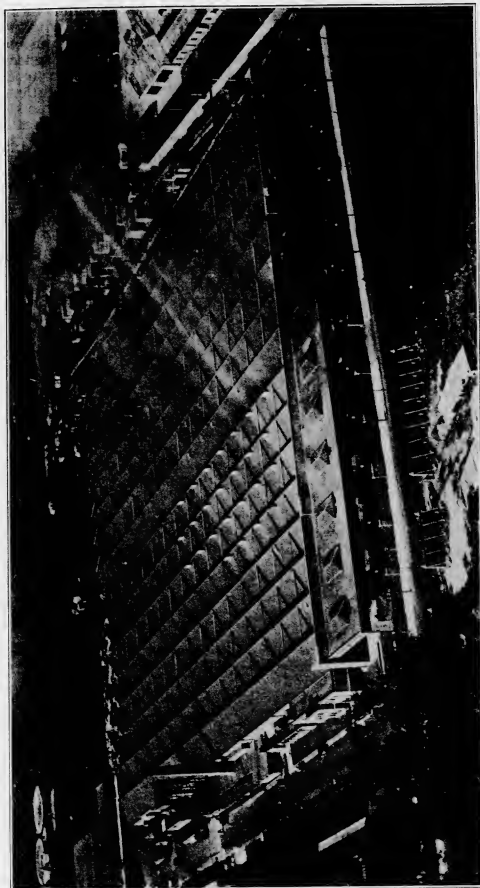


FIG. 1.—Aerial view of an American assembly plant near London

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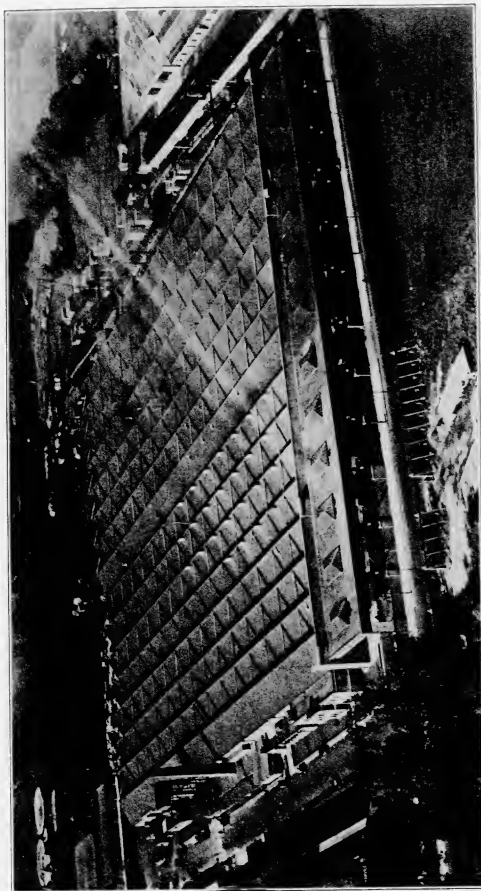


FIG. 1.—Aerial view of an American assembly plant near London

one consideration, as, for example, a certain group of manufacturing industries, mining, or agriculture. The wide diversity of industrial and commercial activities in the country permits a decline in one particular branch without serious effect upon another or a general impairment of purchasing power. A poor cotton year may mean depression in the Lancashire textile area, which would have little or no effect upon the Sheffield iron and steel industry. A strike in the coal-mining districts may have disastrous effects upon practically every other industry in the country and yet actually stimulate the trade in automotive products for transport purposes while railways are short of coal.

In brief, the increase in registration for all classes of motor vehicles during the past few years gives testimony to the contention that the market's purchasing power has remained not only constant but has steadily increased with the growing demand for vehicles. No more striking example could be cited of this situation, as it exists in Great Britain, than the prolonged coal stoppage of 1926, which was accompanied at the start by a general strike of transport and other workers. With every other industry in the country suffering loss, British manufacturers of motor cars, trucks, and motor cycles produced and sold more vehicles than in any previous year in the history of the industry.

It is easy, therefore, to demonstrate the stability of purchasing power so far as automotive vehicles are concerned. The bearing which standard of living has upon the trade is more difficult to gauge. Judged by European standards, the British standard of living is exceedingly high; wages are good, and the actual and potential car-owning public is in excess of any country except the United States. And yet, despite increased car sales during the postwar years, the lowering of car prices, and increased time-payment facilities, the automobile is still regarded by the general public as a luxury article.

The following analysis of the potential consumption of passenger cars in Great Britain, based on distribution of income, was made recently by the Society of Motor Manufacturers and Traders (Ltd.), in London, and probably gives as accurate conclusions regarding the subject as it is possible to make:

Although the materials necessary for any close analysis of this problem are not at present available, the following rough estimate may be of value as a corrective to exaggerated ideas which are sometimes entertained as to the potentialities of the British market.

In the following table the approximate distribution of the incomes of British taxpayers for the year 1924-25 is given according to income classes on the basis of the reports of the commissioners of inland revenue.

A PROXIMATE DISTRIBUTION OF INCOME, GREAT BRITAIN AND NORTHERN IRELAND

Exceeding	Not exceeding	Number of incomes	Exceeding	Not exceeding	Number of incomes
£130	£200	7,000,000	£2,000	£2,500	24,250
200	250	950,000	2,500	5,000	36,800
250	300	500,000	5,000	10,000	16,300
300	400	444,000	10,000	15,000	4,725
400	500	214,000	15,000	20,000	1,991
500	600	128,000	20,000	25,000	967
600	700	88,000	25,000	30,000	634
700	800	70,000	30,000	40,000	670
800	900	54,000	40,000	50,000	380
900	1,000	44,000	50,000	75,000	350
1,000	1,500	117,000	75,000	100,000	134
1,500	2,000	52,000	100,000	-----	162

Different individuals will form widely different conclusions from these figures. There are, no doubt, many car owners with smaller incomes than £450 per annum and also many persons with incomes above that amount who are not car owners. Assuming, however, that these factors balance, and that the first four income classes and half the fifth can be excluded as potential car users, and assuming that persons with incomes exceeding £2,000 per annum are, on the average, potential users of two cars, we arrive at a potential car consumption under existing conditions of \$35,000, as compared with a present registration of 686,000 cars.

Any estimate of the potential market requires consideration from several aspects: First, the constant fall in the price of cars will make inroads into the fourth, and even the third, of the above income classes; second, the above analysis is related to the fourth year of grave industrial depression, the removal of which would at once create a large number of potential car owners; third, the second-hand car market introduces an entirely unknown element in connection with the use of the motor car by the wage earner.

The development of the last factor will, no doubt, be much affected by the progress of house construction on the outskirts of towns and of the provision of cheaper garage accommodation. The tentative conclusions noted above may safely be regarded as a minimum figure, it being understood that there are many dynamic circumstances constantly tending to make it an underestimate.

In connection with the foregoing it is also important to understand that the motor cycle in Great Britain has, at least up to the last few years, taken the place of the low-priced car in the United States. There are 629,000 motor cycles in use, and probably a great majority of them are owned by people who up to the present time have not been able to afford a car. This can not be said without reservation, however, since the motor cycle still occupies an important position as a general utility and pleasure vehicle, and a trip on any highway in the country will disclose large numbers of motor cycles with side-car attachment being used to convey whole families for pleasure motoring. It is safe to conclude, on the other hand, that as cars continue to decrease in price the four-wheeled motor vehicle will gradually supplant many of the motor-cycle combinations now seen on British roads.

As an accurate summary of the general conditions surrounding the British domestic automotive market, the following comments, recently made by Lord Montagu, of Beaulieu, a recognized authority on motoring, are of interest:

It is not perhaps generally recognized that, up to the date of the war, 15 years of motor-vehicle development had steadily taken place but with no phenomenal increase year by year in the number of vehicles. During the war years, however, tens of thousands of British and foreign cars were used for various military purposes, and large numbers of drivers, mechanics, and others connected with the industry were trained. The needs of the army for all types of motors led to installation of the latest machinery in plants, great enlargement of factories, and a much wider diffusion of knowledge throughout the population respecting the advantages of motoring. By the beginning of 1920, or a little more than a year after the war, there were 191,000 privately owned motor cars and only 61,000 commercial vehicles in Great Britain, in addition to which there were about half a million motor cycles in use. Since then the growth of road transport vehicles of all types has been little short of marvellous.

As a natural result, public opinion became concentrated on road questions and problems. The road board had already done much in improving the highways, and motor taxes were paid without ill feeling. The taxation levied last year on motor vehicles yielded no less than a round £16,000,000, as against about £4,000,000 in 1913. This great development of private and commercial road transport was due to many reasons. Motors had become easier to manage and drive; repair and supply shops were everywhere to be found; and tires which formerly had an average life of 2,000 or 3,000 miles were so improved that double that mileage became quite a common experience. As regards the privately

owned vehicle, the coming of the cheap car has done much to convert all classes of the community to a realization of the advantages of motor transport.

With respect to the commercial side, both wholesale and retail merchants have begun to realize now, when labor is so expensive, that the saving in handling much more than makes up for the slight extra cost of conveyance per ton per mile which is involved in road transport. Where promptitude is important, the road can beat the railway up to quite long distances for medium-weight goods and parcels traffic. The heaviest commodities, such as coal and iron, are, of course, still conveyed by rail. As for public transport, notwithstanding the claims of tramway partisans, the motor bus is now the quickest. Many populous centers have scrapped their tramways and installed motor busses. One has only to think of London and other big towns without motor busses to realize that the public services of the bus and chair-banes have become part of our everyday life. Motor coaches, too, have established a cooperative principle in traveling, and now one can go the length and breadth of the country by motor coaches on regular schedules.

As for tires, giant pneumatics are to-day fitted on most of these long-distance vehicles, and it is believed that in a few years a vehicle of any type fitted with a solid tire will be a rarity.

## GREAT BRITAIN

### PRODUCTION

Domestic manufacture of automotive vehicles in Great Britain began in the early days of the industry, and British engineers were among the first in the field. Cars were domestically produced on a commercial basis as early as 1896, in which year the act limiting the speed of motor vehicles traveling on British roads to 4 miles an hour was repealed. Up to that time the law required that a motor car be preceded by a man on foot carrying a red flag.

Since the late nineties, British automotive engineering has played an important part in the progress of the world motor industry and takes its rightful place among the pioneers in this respect. The fact that development, particularly since the war, has been proportionately less rapid than in the United States, is owing largely to the smaller home market, less capital to employ in the industry, and high domestic taxation. It has been stated repeatedly that the present horsepower tax of £1 per annum per horsepower on passenger cars has proved a most effective deterrent to the British motor industry. From the American viewpoint this can more readily be appreciated when it is realized that on such a basis a 20-horsepower car in Great Britain costs nearly \$100 per year in taxation alone.

To offset this tax, British manufacturers have evolved the many makes of light cars from 7 to 12 horsepower now on the market. Such cars have small bore and long-stroke engines which will furnish sufficient power for cars on the excellent roads in Great Britain; but they have proved unsuitable in many foreign markets where high-powered vehicles are needed, and the British industry has consequently lost valuable outlets for volume sales which would have permitted greatly increased production in the home factories.

Despite this drawback, however, automotive manufacture has progressed to the point where it ranks chief among the engineering trades and is relatively as important to the economic structure of the country as is the same industry in the United States. Whereas in 1907 the combined production of both cars and trucks totaled but 12,000 vehicles, and 73,000 in 1922, British makers in 1926 turned out approximately 138,500 passenger cars and 41,500 trucks. Motorcycle production shows a similarly important increase. During

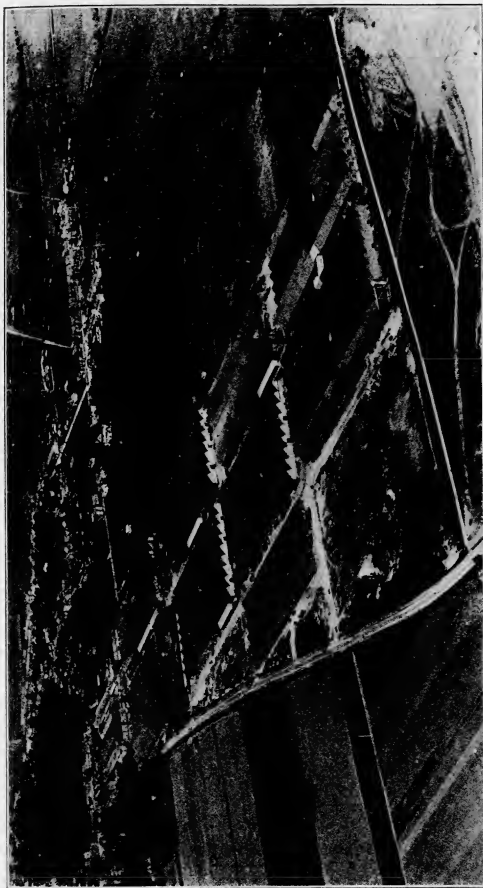


FIG. 2.—Plant of the leading British automobile manufacturer

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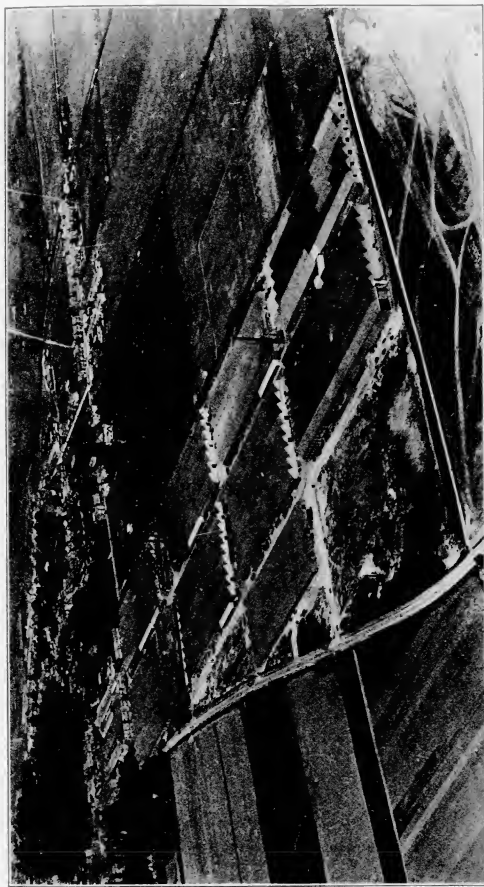


FIG. 2.—Plant of the leading British automobile manufacturer

1926, there were 120,000 motor cycles manufactured, compared with 63,000 in 1919, 60,000 in 1922, and 80,000 in 1923.

As to the importance of the industry on the financial side, the 130,000 cars and trucks produced in 1926 represented a factory value of about £54,000,000, or approximately \$270,000,000. In the passenger car manufacturing industry alone more than £20,000,000 of capital is invested, while revenue resulting from the horsepower tax exceeded £17,000,000 in 1926.

With reference to the number of firms in Great Britain actually engaged in the manufacturing side of the industry, it is frequently stated that there are too many for the ultimate good of the industry as a whole. There are at the present time about 65 British makes of passenger cars and 56 makes of gasoline and electric trucks. In this connection it is interesting to note that about 120 British makes of passenger cars have gone out of production since the industry began and about an equal number of trucks. Students of the progress of the industry firmly maintain that further amalgamation of the smaller manufacturers with the larger firms must be brought about on lines similar to some of the large American groups if the British automotive industry is to expand to any considerable extent in the future.

With respect to motor cycles, there are over 100 British makes now on the market many of them produced, of course, by firms also engaged in car manufacture.

The production figures quoted are chiefly estimates made by the Society of Motor Manufacturers and Traders, and, while unofficial, are the most accurate obtainable. The latest official automotive production statistics are contained in the census for 1924, and not issued by the board of trade until March, 1927. However, the following table from that census compares production totals with the two previous census years, 1912 and 1907, and shows the substantial progress made in the intervening periods:

BRITISH AUTOMOTIVE PRODUCTION

Product	1924		1912		1907	
	Quantity	Selling value	Quantity	Selling value	Quantity	Selling value
Motor cars and chassis.....	Number 146,600	£40,039,000	Number 23,250	£7,436,000	Number 10,300	£3,585,000
Motor cycles and triars, complete.....	120,400	5,877,000	36,700	1,613,000	3,700	137,000
Cycles (not mechanically propelled), complete bicycles or triars.....	681,600	3,771,000	467,000	2,121,000	613,200	3,383,000
Parts of motor cars.....		14,357,000		2,042,000		322,000
Parts of motor cycles, triars, and cycles.....		8,696,000		2,286,000		1,845,000
Airplanes and parts.....		3,553,000		36,000		
All other products (including work done for the trade).....		2,616,000		703,000		421,000
Repair work.....		14,887,000		1,744,000		1,690,000
Total.....		93,819,000		18,609,000		11,533,000

## LOCATION OF THE INDUSTRY

The factories of nearly all the important domestic manufacturers of cars, trucks, and motor cycles are located in the central portion of England, known as the Midlands; this is likewise true of makers

of parts and accessories. Coventry, Birmingham, and Wolverhampton are the three chief cities in the Midlands engaged in automotive production, although important firms are located at other Midland points but not immediately adjacent. For example, the Rolls Royce plant is at Derby; the Morris assembly plant at Cowley and Oxford; and the Leyland plant at Leyland, in Lancashire. Since the war, especially, there has taken place a diffusion of automotive manufacturing plants throughout southwest England, and a few important firms are located in the northern counties and in Scotland; but, as already stated, the greatest number are in the immediate vicinity of the Coventry district, which is commonly spoken of as the "home of the motor industry" in Great Britain.

There are several reasons why the industry is concentrated in the Midlands area. In this district the cycle and allied engineering trades were first developed, and with the coming of motor cars many of the cycle producers began the manufacture of automobiles. The district is further admirably suited for automobile manufacture as there is an abundant supply of the necessary kind of labor in that vicinity; accessory and allied engineering trades are near by; and, most important of all, the central position of the district with respect to the country as a whole makes delivery of completed vehicles to all parts of the country simple and convenient. The "driveaway" system of delivery is almost universal, and consequently the area occupies an advantageous situation for this purpose.

The city of Manchester and its environs, although about 200 miles north of Birmingham, is likewise in the Midlands area and is an important automotive manufacturing center, and two important American assembly plants are located there. The Ship Canal at Manchester gives access from Liverpool to shipments by water of automotive vehicles and parts for assembly, thus obviating the necessity for transshipment after loading on the vessel at a United States port.

Most of the other assembly plants are located in and around London. London is also easily accessible by water from the coast via the River Thames. Shipments are unloaded onto the docks at London and taken to a plant or warehouse by motor truck, and no rail shipment or charges are necessary.

## PRINCIPAL BRITISH PLANTS

Although, as previously stated, the number of manufacturing firms in Great Britain is large, there are relatively few firms manufacturing automobiles in large quantities. Mass production, as it is understood in the United States, has not been extensively developed. During the past few years, however, a few firms have attempted car manufacture on mass production lines and with considerable success. The two outstanding firms are the Morris and Austin companies.

## THE MORRIS COMPANY.

The Morris firm now produces about 60,000 cars per annum and ranks as Great Britain's leading manufacturer, producing nearly half of the total number of automobiles manufactured in the country. This firm makes the Morris-Cowley and Morris-Oxford light cars, and, in addition, an 8-hundredweight and a 1-ton truck. The Morris factories are in the south central portion of England at distances from London varying from 50 to 100 miles. Besides the car assembly

plants at Oxford and Cowley the firm has an engine plant at Coventry, where engines for all the Morris vehicles are produced. The 8-hundredweight commercial van is built at Cowley, but the 1-ton truck is built at another factory in Birmingham, also owned by the Morris company. The Coventry engine factory is regarded as one of the most modern and efficient in England. For an output of 1,250 engines per week there are never more than 2,500 cylinder blocks in the factory, rough castings being delivered and dispatched as finished engines in from 10 to 14 days. Large numbers of specialized American machines for high-production work are in operation in this as well as other plants of the Morris organization. This factory is one of the few plants in England which have worked for considerable periods on a 24-hour day, seven days a week. According to a recent statement the Morris firm plans to produce about 80,000 cars and trucks during the year 1928.

The Oxford and Cowley plants cover an area of approximately 45 acres, and with body-building, paint and varnish shops, supply stores, assembly sections, and production offices are capable of turning out 2,000 complete chassis per week. The growth of the company's production is shown by the following statement of cars produced in the years ended August 31:

1920-----	357	1924-----	27,551
1921-----	2,927	1925-----	48,717
1922-----	5,156	1926-----	56,000
1923-----	17,286	1927 (estimated)-----	60,000

The total number of employees in the Morris factories is about 9,000, and the firm is understood to pay an average wage considerably above that for the motor industry as a whole—79s. 5d. per week; in addition, employees are given the benefit of an obligatory form of insurance.

#### THE AUSTIN COMPANY

The Austin automobile factory at Longbridge, a few miles outside Birmingham, covers an area of about 62 acres and employs over 8,000 men and women in the works. This factory represents the largest self-contained automobile plant in the British Isles, the entire range of cars and trucks manufactured by this firm being completely produced at this one factory. A large and well-equipped foundry is located at one end of the plant, and from this point departments lead out in the required order to the other extreme end, where the finished vehicles are ready for delivery. All of the coach and body work of the standard Austin cars is done in the factory.

The Austin company ranks as the second largest producer of automobiles in England. The total output for the year 1926 was approximately 25,000, and for the year 1927 it is estimated that the production will be about 30,000 vehicles.

The Austin products include in the passenger-car field the 12, 12 and 20 horsepower models, and in the commercial-vehicle field a 20-horsepower ambulance, a 20-horsepower 16-hundredweight delivery van, a 12-horsepower traveler's brougham, and a 7-horsepower light delivery van.

No other English manufacturers approximate the Morris and Austin firms from the standpoint of production. The Singer company at Coventry produce approximately 10,000 cars per annum, the Clyno

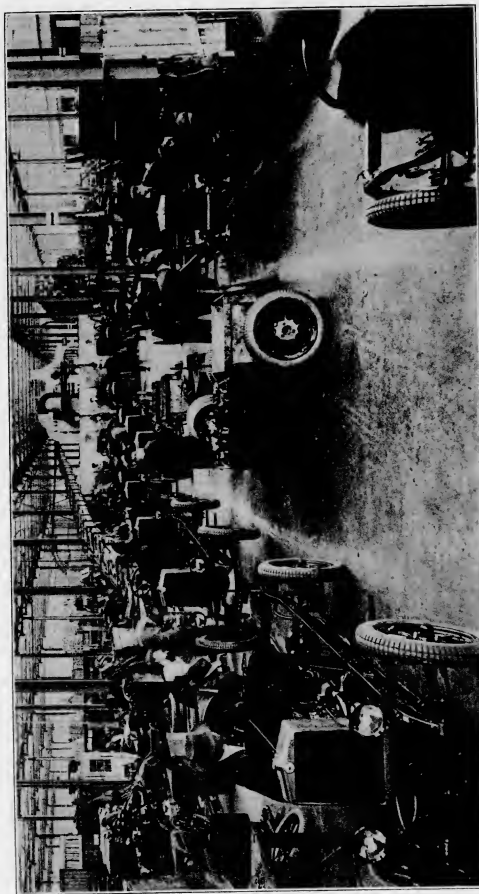


FIG. 3.—Final chassis assembly in a British plant.

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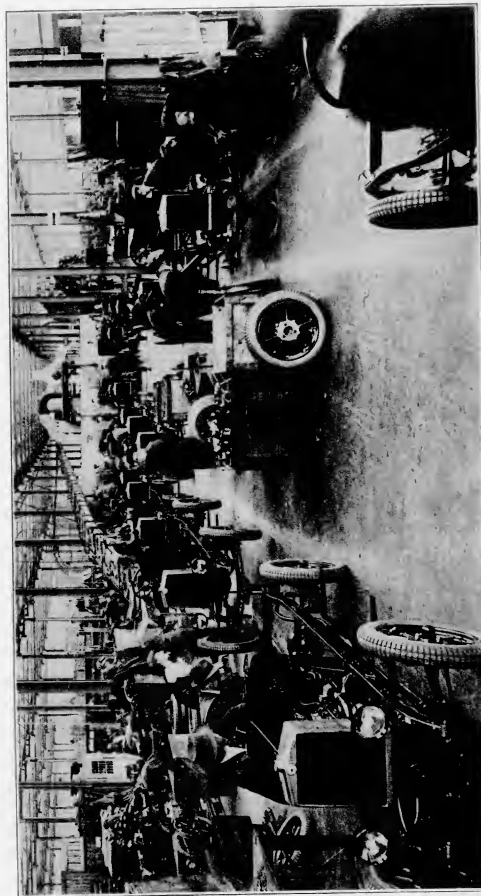


FIG. 3.—Final chassis assembly in a British plant.

company at Wolverhampton approximately 6,000, and the Standard company at Coventry approximately 5,000. No actual figures of production by these firms are available, but the estimates given have been obtained from reliable sources.

#### MANUFACTURING METHODS

In general, British manufacturing methods closely approximate those in the United States. Factories are divided into departments, with the flow moving continuously from the earliest point of assembly to the final point of completion of each particular unit. Line assembly is practically universal, and most of the larger plants make use of chain conveyors in engine and chassis assembly. Standard bodies are made on jigs, the woodworking and body-making department being conveniently located to meet the assembled chassis as they leave the line. For the painting of chassis parts dipping is widely employed, and in all the principal factories spray painting and varnishing of standard jobs is the rule. Hand varnishing and finishing of special jobs is, however, still in vogue.

An important difference between American and British production methods is found in the extent to which British producers undertake special jobs of body and paint work to suit individual requirements. Further, British manufacturers supply chassis to coach-building firms or private purchasers for equipping with special bodies to an extent not ordinarily practiced by American makers.

Since the war, and especially during the past five or six years, British automotive plants have undergone much improvement and modernization. To cope with increasing demand for automotive vehicles and to meet competition, considerable plant extension and new machinery were necessary. For these purposes large quantities of American machinery have been utilized, particularly stamping and pressing machinery, lathes, etc., where high production and precision work is required.

The largest firms do most of their own pressing of radiators, frames, body panels, and fenders, but there is a large industry in Great Britain of special firms who do this class of work for automobile plants not equipped to do it themselves.

A large number of the smaller manufacturers are in reality only machine plants for assembling the various units that go into the composition of an automobile, engines, parts, accessories, and equipment being purchased on the out side from manufacturers who specialize in that class of production.

#### ASSEMBLY PLANTS

The second large division of the British automotive market is the importation and sale of foreign vehicles. At the close of the war, and for a few years thereafter, the sale of imported cars was much larger than it is to-day. For example, in 1922 about 51 per cent of the total sales of passenger cars in Great Britain was made up of imported makes. With the increase in British domestic manufacture, however, and the steady development of the domestic automotive industry, sales of imported vehicles have declined until, at the end of the year 1926, they represented only about 14 or 15 per cent of the total car sales in the British Isles. The year 1927 was distinctly different, however, and car imports increased by nearly 50



FIG. 4.—Chassis assembly lines in the plant of England's second largest automobile producer

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FIG. 1.—Chassis assembly lines in the plant of England's second largest automobile producer

per cent. The number of passenger cars imported into Great Britain for 11 months—January to November, in 1926—was 9,836, valued at £1,626,270, and in 1927 was 18,004, valued at £3,293,717.

Sales of American and other imported cars in the British market, therefore, represent a larger proportion of total car sales in 1927 than was the case in 1926.

There are 78 foreign makes of cars on the British market, divided between the different nationalities as follows: American, 32; French, 28; Italian, 11; Belgian, 4; Austrian, 2; German, 1.

A number of the American, French, and Italian cars are almost as universally well known as British makes and continue from year to year to have a fair share of the market. Importation of complete cars ready for the road now forms, however, much the smaller proportion of the import trade. Those makes of foreign cars which have the widest sale are assembled in the British branches or assembly plants of the manufacturers where complete organizations are maintained for marketing their cars. Owing to the British method of compiling customs returns, complete units and parts for assembly are classified as complete cars, and it is therefore not possible to separate cars for assembly from cars imported complete in the foregoing in port figures.

#### EXTENT OF AMERICAN ASSEMBLY

Of the 32 American makes of cars now on the British market, 12 leading makes are assembled or partially assembled locally. In some cases complete assembly is undertaken, even including the various individual units of the vehicle. In other cases the units are assembled before shipment to Great Britain, the British assembly plants being used for putting these units together and painting and finishing the car. One popular low-priced American car is now completely manufactured at the British factory, which, in its modern equipment and methods, closely approximates the procedure followed at the home factory in the United States. The vehicle, however, is designed specially for the British market.

#### FRENCH AND ITALIAN ASSEMBLY

Of the French makes, Citroën and Renault, and of the Italian makes, Fiat, are now assembled in Great Britain. Of these plants the Citroën organization at Slough in Buckinghamshire is the most important. As at present operated, it is an assembly plant only, there being no foundry or machine shop. The company, however, maintains at its Hammersmith headquarters in London (now used as a sales and spare-parts depot) machine-tool installations for the purpose of repair work. The area of the Slough plant is about 8 acres under roof, and the firm has purchased adjoining vacant land to the extent of nearly another 8 acres for future expansion if necessary. All parts of the car are shipped from France, the engine and axle units being assembled in the French Citroën factory. The steel bodies now standardized on Citroën cars are, however, imported unassembled, and the same is true of chassis frames.

Throughout this plant line assembly is used, the flow from the parts and units stores being continuous right up to the point where the finished car is rolled off the conveyor. Propulsion is entirely by chain conveyors. The plant is extremely modern in all details, well situated, and well lighted, the chain conveyors being of American

manufacture and line assembly on the same principle as employed in the French Citroën works. Painting and varnishing is done by spray guns (all American equipment), and there are six large drying chambers with the chain conveyor running through them.

Both the 11 and 12 horsepower models now on the British market are assembled at Slough, the capacity of the plant being from 100 to 125 cars per day. About 800 or 900 people are employed in these works.

#### ADVANTAGES OF LOCAL ASSEMBLY

To explain the extent to which imported cars, now so popular on the British market, are assembled locally, it is only necessary to remember that the employment of British labor, the use of at least some British material and equipment, and the fact that sales organizations are actually on the ground, are all important factors from the standpoint of meeting competition. It is estimated that for the year 1927 sales of American motor vehicles in Great Britain reached the fairly substantial total of about 25,000 cars and trucks. By importing cars unassembled considerable expense in freight and duty payments is saved. Also, in the final local assembly of the car it is far easier to effect such necessary alterations or changes as make the car a more salable product to the British public. For example, British taste demands to a greater extent than American taste, nickel plating on exposed metal parts; low and deeply inclined seats are preferred, as well as a wider variety of exterior color finishes. The American assembly plants in England are, of course, fully cognizant of the local preferences and prejudices and are usually able to meet them by relatively unimportant changes from the standard American car. It is this policy which has meant wider popularity for certain American makes in the British market and caused them to become almost household words, together with the more familiar makes of British vehicles.

#### SELLING AND SALES PROMOTION

The British public is undeniably "motor-minded." A keen general interest is taken in motoring, as evidenced by the large attendance at the annual motor shows. Owners, in general, are well informed with respect to the mechanical details not only of the cars owned by them but of other makes on the market. The various popular motoring journals and magazines are widely read, and it is a common occurrence to hear the respective merits of well-known makes of cars discussed with enthusiasm whenever present or prospective car owners meet. The public keeps abreast of the latest models and improvement by visiting exhibitions, perusing catalogues, and reading advertisements in the press and the special motoring articles that are features of all the leading newspapers.

It is not too much to say that the average British purchaser exhausts every avenue of information at his command before finally deciding what car he will purchase. This is particularly true where price is a determining factor. Once the decision is made it may be taken for granted that the intending buyer has studied the details of all competitive makes, has had demonstrations from dealers in his district, and knows exactly why the particular vehicle he is purchasing suits his requirements.

It is easy to understand, therefore, that intensive selling methods are an absolute necessity in the British market if a substantial sales volume is to be obtained.

#### ADVERTISING

Undoubtedly the most valuable and effective single factor in automotive selling in Great Britain is press advertising, and all manufacturers and importers make use of it. Certain London daily papers such as *The Times*, *Daily Mail*, and *Daily Express*, and weekly journals like *Punch*, *The Tatler*, and the *Illustrated London News* rank as national advertising mediums, since they are distributed and widely read all over the British Isles, including Ireland, on the date of issue. Because of their nation-wide appeal and large circulation, advertising rates in such journals are correspondingly high. For example, the *Daily Mail* recently quoted £7 per inch for reading-matter position, and £6 per inch for ordinary position. A standard rate for any of the other important morning papers is about £4 per column inch.

The trade press consists mainly of weekly periodicals, of which there is a fairly large number. A few rank as popular publications and appeal mainly to the public, and for this reason their advertising rates range from £32 to £34 per page. Others are published principally for the automotive industry and contain more technical and trade data. In this category a distinction is made between the types of vehicles covered, there being separate periodicals devoted to passenger cars, trucks, and motor cycles. Advertising rates are somewhat lower in the technical publications, and range between £10 and £15 per page.

Popular weeklies, such as *Punch* and *The Tatler*, are regarded as especially desirable because of their Empire circulation, and for that reason are included in any extensive advertising campaign.

All of the leading domestic manufacturers and importers place their advertising programs and campaigns in the hands of one of the several well-established advertising firms in London, and these firms handle the detail of deciding what newspapers and periodicals shall be employed and the amount and type of space to be used, all based, of course, upon the amount appropriated by their clients for advertising purposes. In this respect the procedure is about identical with practice followed in the United States.

Substantial sums are spent by the larger manufacturers and importers in their advertising work. A leading British producer appropriates about £150,000 per year for this purpose, while some of the American companies are spending anywhere from £40,000 to £100,000 per annum in their British advertising.

High-powered selling arguments are used freely, and choice of this type of copy, especially for the imported car, is best left to the advertising agency employed, since it understands local conditions and is able to judge the effect of the copy upon the readers it is intended to reach. Several leading American advertising agencies have London headquarters, so that American automobile manufacturers are able to make use of facilities in Great Britain to which they are accustomed in the home market.

Aside from the advertising through national mediums, outlined above, which is financed by manufacturers themselves, distributors, dealers, and agents are likewise required by their contracts to under-

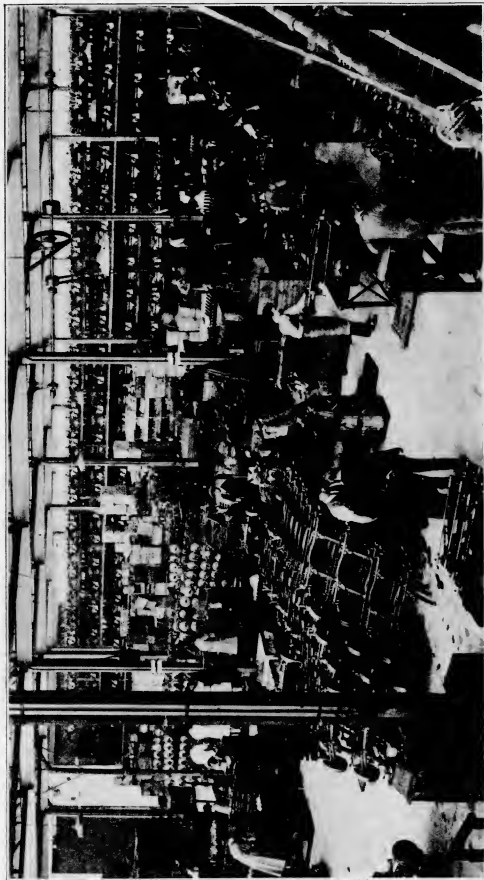


FIG. 5.—The stock room of a British automobile manufacturer

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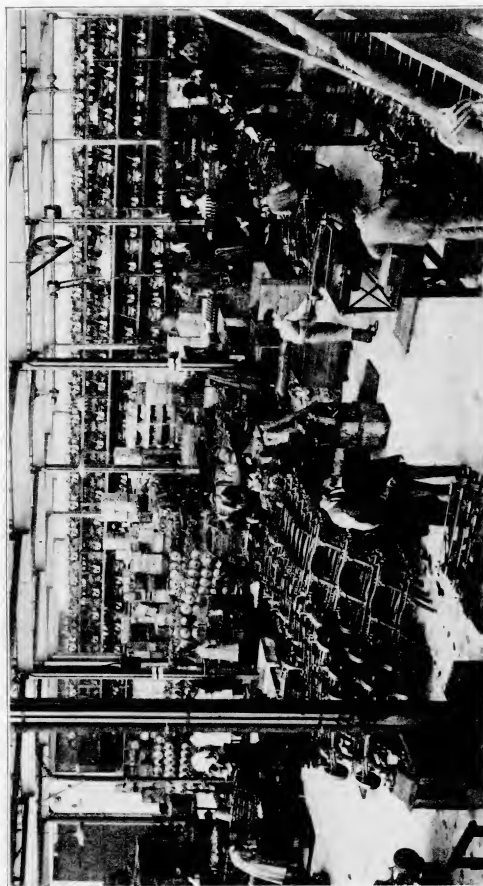


FIG. 8.—The stock room of a British automobile manufacturer

take advertising work through display of signs on their places of business and by advertising in local newspapers. About £2 per car is the average rate demanded by dealers for local advertising of this sort.

Posters and billboards are used for both city and rural advertising purposes, and in London and a few of the larger provincial cities electric-sign displays have appeared during recent years. Space in tramway cars and busses and the underground coaches in London is utilized for automotive display advertising to a limited extent. Provincial motion-picture theaters regularly include an advertising film of local industries and businesses in their programs, and one frequently sees makes of cars advertised by this means, with special emphasis on servicing maintained by the advertising dealer or garage proprietor.

Briefly, it may be said that the science of advertising has made great strides in Great Britain and that all modern mediums are available to the automotive industry.

Much free publicity is obtained through articles by motor correspondents in the press. Circularizing is a part of the regular business practice of many leading dealers, while, of course, the annual exhibitions held in London are of inestimable value to manufacturers and exporters alike from the standpoint of publicity.

The spring and summer months, or April to August, inclusive, constitute the most favorable season for passenger-vehicle advertising, while the autumn and winter months are devoted to increased advertising of trucks and other commercial vehicles. Seasonal influences or purchases are, of course, responsible for these practices.

#### MERCHANDISING

The machinery for merchandising automotive vehicles in Great Britain is extensive and well developed, differing from American practice more in degree of advancement than principle. An American manufacturer entering the market finds trade channels already established and along similar lines to which he is accustomed, with the important difference that he must face competition from practically every important make of car in the world. Owing to this situation, exclusive representation is rarely ever obtainable. Among dealers in automotive vehicles it is not uncommon to find the larger and more important firms handling 8 or 10 makes of cars. Even small dealers will hold the local agency for four or five different makes. In some instances the same dealer will handle domestic and foreign makes together, and because he is the only important dealer in his district manufacturers and importers who desire his services must accept the situation or have no responsible representative in that district.

Trade channels through which the domestic manufacturer distributes his products may be briefly defined. Distributors are appointed at various points throughout the country and given a closed territory, so far as wholesale business is concerned. No closed territories for retail sales are prescribed. The distributors are expected to appoint dealers and subdealers within their territories and see that proper servicing facilities are kept available for the vehicles which they handle. Contracts between distributors and manufacturers and between dealers and distributors are usually made to run for one year and prescribe the terms and conditions on which the representation is based and an estimate of the number of cars which may be

sold in the territory during the period. New contracts for the next year's sales are made, so far as possible, at the time of the motor shows, when the latest models of vehicles are available for inspection, and some idea may be gained of the quantity which can be sold in in the distributor's territory for the coming year.

British manufacturers work in close harmony with their distributors and dealers, and the factories offer facilities for major repair work of vehicles of their own manufacture. This is a strong talking point with any distributor of a British car in the domestic market.

So far as distributor and dealer contractual arrangements are concerned, however, close inquiry shows that they are respected more in the breach than in the observance. Owing to the highly competitive market conditions, some of the English manufacturers stock distributors or dealers on a consignment basis, a business practice which is, however, not followed by any of the American firms represented in the British market.

Firms which represent foreign manufacturers of automotive vehicles are commonly termed in England "concessionaires;" the word is self-explanatory, and, as it indicates, means that the manufacturer has granted a concession to the importer for the sale of his vehicles in a given territory, or throughout the whole of the British Isles. A number of such concessions have been granted by American manufacturers, who turn over to the English firm the entire conduct of their British business, based, of course, on the terms and conditions laid down in the agency contract drawn up between them.

The local selling price of the car is usually left to the discretion of the concessionaire, but the manufacturer should take pains to see that the final retail price is not set at too high a figure to injure future sales. Usually this is not difficult to arrange, as, owing to high British cost of production, American cars can be priced lower than comparable British domestic makes.

Once the concessionaire has assumed representation for a line, the trade channels through which he makes sales in the British market are practically identical with those followed by domestic manufacturers.

One important point in favor of the American car, particularly those makes now assembled in Great Britain, is the fact that discounts can usually be granted at higher figures than those allowed by British manufacturers. The average discounts allowed on the American makes are 22 to 25 per cent and by English manufacturers 17½ to 20 per cent.

For reasons explained above, no specific form of distributor or dealer contract can be taken as the standard used by all the manufacturers and concessionaires. The terms contained in the form of contract printed in the appendix are, however, in general use between distributors or dealers and the manufacturers or concessionaires whom they represent. If, owing to unforeseen circumstances, a bad selling season or other inadvertence, the contract can not be lived up to in all its requirements, particularly with reference to the estimated number of cars to be sold, it is rare that the manufacturer or concessionaire takes summary measures against the dealer. (The publication of the distributor-dealer agreement form in the appendix does not imply the recommendation of the Bureau of Foreign and Domestic Commerce for use of such form in all cases; this is merely

an example of a type of agreement in use in Great Britain, and any firm adopting the form necessarily does so on its own responsibility.)

There are approximately 13,000 automotive dealers in Great Britain, of which about 12,000 are members of the Motor Traders Association. Since membership in the association is open only to firms having a showroom or garage, this means that approximately 12,000 firms in the country are properly equipped to act as dealers in automotive products and leaves the inference that the additional 1,000 dealers are not properly equipped for the business.

The number of dealers appointed by an individual manufacturer depends, of course, on the extent of his penetration into the market, but the average, considering the number of makes of cars sold in comparison with the number of dealers in the country, is around 100. One leading American company, on the other hand, averages between 400 and 500 dealers in England, Wales, and Scotland, and 100 in Ireland. Another important American company maintains agreements with 450 dealers throughout the country, while two other American firms with good distribution in Great Britain have approximately 200 dealers each.

#### PRICES

The policy of car pricing in the British market is one of a fixed retail selling price, alterable only by the manufacturer, and current retail selling prices of cars and motor cycles are published monthly by the trade press.

Prices of trucks and other commercial vehicles are likewise currently available, but usually for chassis only. Since the Windsor scheme for publishing the average prices obtained for used cars became effective last year, a monthly price list of used cars has been issued regularly by the Motor Traders Association and made available to the public through the trade press and otherwise.

Despite the fact that the fixed price basis is theoretically maintained, careful inquiry shows that there is an enormous amount of price cutting by dealers. This is usually in the form of splitting commissions, a practice very much deprecated by manufacturers, but difficult to overcome because of heavy competition. It is frequently stated that the intending purchaser of a car will "shop around" among dealers until he obtains a price below which he knows no responsible dealer will be able to go and make any profit whatsoever for himself. There is considerable "playing off" of one dealer against another by an intending purchaser to gain his end in this respect.

#### INSTALLMENT PURCHASING

Concurrent with the movement in the United States the sale of automotive vehicles on the installment plan has made great strides in the British market during the last few years. In London and some of the other large cities it is estimated that at least 60 to 65 per cent of passenger cars are now sold on this basis. Some of the principal manufacturers, notably the Morris company, finance their own time-payment plans, and of recent date some of the more important dealers in London have undertaken similar schemes. In general, however, the financing of car purchases by installments, or "hire purchase," as it is called in Great Britain, is handled by separate financing companies, of which there are a half dozen important firms with headquarters in London.

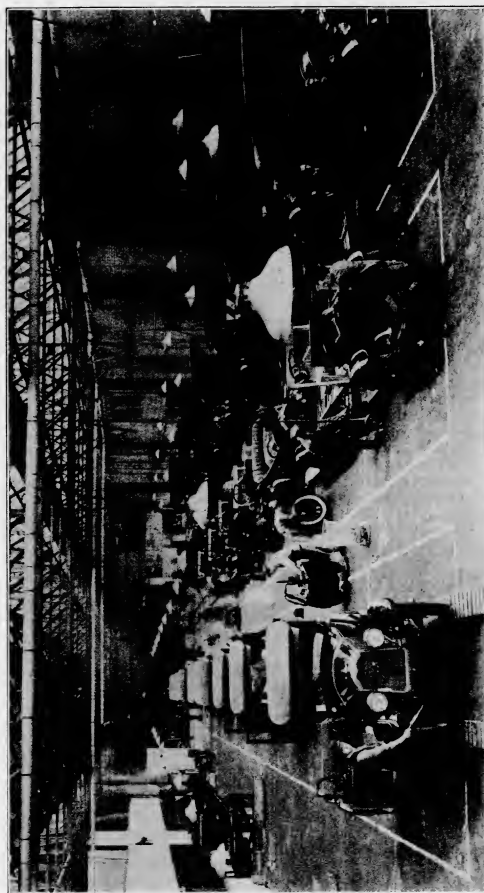


FIG. 6.—Assembly lines in an American branch plant near London

an example of a type of agreement in use in Great Britain, and any firm adopting the form necessarily does so on its own responsibility.) There are approximately 13,000 automotive dealers in Great Britain, of which about 12,000 are members of the Motor Traders Association. Since membership in the association is open only to firms having a showroom or garage, this means that approximately 12,000 firms in the country are properly equipped to act as dealers in automotive products and leaves the inference that the additional 1,000 dealers are not properly equipped for the business.

The number of dealers appointed by an individual manufacturer depends, of course, on the extent of his penetration into the market, but the average, considering the number of makes of cars sold in comparison with the number of dealers in the country, is around 100. One leading American company, on the other hand, averages between 400 and 500 dealers in England, Wales, and Scotland, and 100 in Ireland. Another important American company maintains agreements with 450 dealers throughout the country, while two other American firms with good distribution in Great Britain have approximately 200 dealers each.

#### PRICES

The policy of car pricing in the British market is one of a fixed retail selling price, alterable only by the manufacturer, and current retail selling prices of cars and motor cycles are published monthly by the trade press.

Prices of trucks and other commercial vehicles are likewise currently available, but usually for chassis only. Since the Windsor scheme for publishing the average prices obtained for used cars became effective last year, a monthly price list of used cars has been issued regularly by the Motor Traders Association and made available to the public through the trade press and otherwise.

Despite the fact that the fixed price basis is theoretically maintained, careful inquiry shows that there is an enormous amount of price cutting by dealers. This is usually in the form of splitting commissions, a practice very much deprecated by manufacturers, but difficult to overcome because of heavy competition. It is frequently stated that the intending purchaser of a car will "shop around" among dealers until he obtains a price below which he knows no responsible dealer will be able to go and make any profit whatsoever for himself. There is considerable "playing off" of one dealer against another by an intending purchaser to gain his end in this respect.

#### INSTALLMENT PURCHASING

Concurrent with the movement in the United States the sale of automotive vehicles on the installment plan has made great strides in the British market during the last few years. In London and some of the other large cities it is estimated that at least 60 to 65 per cent of passenger cars are now sold on this basis. Some of the principal manufacturers, notably the Morris company, finance their own time-payment plans, and of recent date some of the more important dealers in London have undertaken similar schemes. In general, however, the financing of car purchases by installments, or "hire purchase," as it is called in Great Britain, is handled by separate financing companies, of which there are a half dozen important firms with headquarters in London.

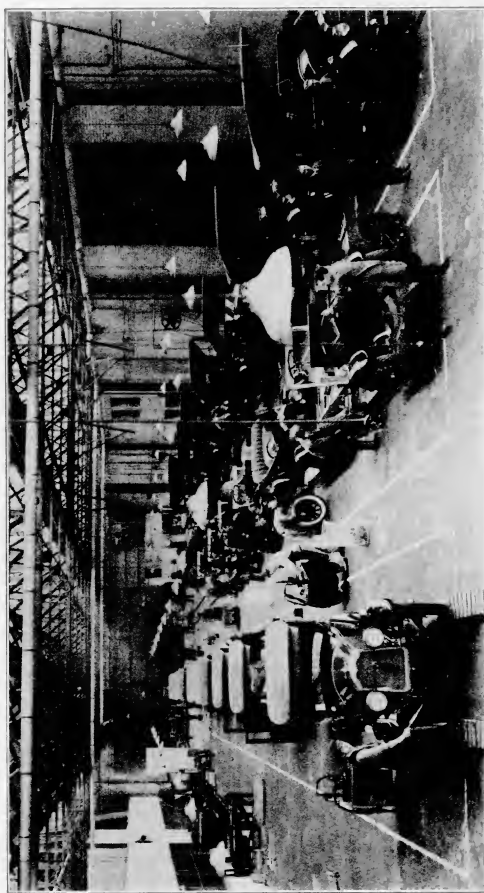


FIG. 6.—Assembly lines in an American branch plant near London

The usual terms are 25 per cent down, the balance in monthly installments spread over a period of 12 to 18 months, although a period of 2 years before the final payment is not unusual. While these periods will appear unduly long to most American manufacturers, they are necessary in England to make the scheme effective. Owing to the ease of obtaining credit and other information regarding a prospective purchaser, the manufacturers and financing companies maintain these long terms can be successfully granted without undue risk. In an old-established community like Great Britain there is less likelihood of a purchaser violating any agreement whereby his credit and standing in the community is adversely affected. If he does so with impunity and moves to a new district his reputation follows him without difficulty. This situation, therefore, simplifies the position for companies engaged in financing time-purchase agreements and insures them to a certain extent against bad risks.

Two interesting examples of time selling, without the initial 25 per cent deposit being required, have recently come to light in London. Two large dealer firms have undertaken this type of selling, the terms of which are, briefly, as follows: Delivery of a car on payment of the first of 12 equal monthly installments, 5 per cent only being added for the credit accommodation; or, if a 10 per cent cash deposit is made, the balance plus 7½ per cent only may be paid in equal installments spread over a period of 18 months. If payment in full is completed before the end of the specified period, the whole of the interest chargeable on the remaining installments is repaid to the purchaser.

When these dealers announced their intention to sell on this basis a considerable outcry arose from the motor trade in general throughout Great Britain, the complaint being that the method was unsound and unfair to other dealers. The firms persisted, however, and now maintain that their sales have been materially increased, and, further, that no serious losses have so far been sustained.

#### GARAGES AND SERVICE FACILITIES

Since the end of the war, and more particularly during the past few years, there has been a considerable increase in the number of public garages and service stations available throughout Great Britain. Private and lock-up garages have also greatly increased in number. These items in themselves furnish an eloquent testimonial to the expansion which has taken place in the British automotive market. Practically every new house erected in the country to-day is equipped with a garage, and the sales possibility for the older property not so equipped has diminished in proportion. It is estimated that there are approximately 10,000 public garages in the country which have filling pump installation. In addition to these garages there are approximately 10,000 additional filling stations (not having garage accommodation) with pumps. Altogether there are between 45,000 and 50,000 gasoline filling pumps now in operation.

To-day it is fully recognized that adequate servicing is as potent a factor in increasing automotive sales as advertising, price, or other consideration, and manufacturers and importers of cars give special attention to these features when considering any new agency applications which are made to them.

#### POSITION OF THE AMERICAN CAR IN THE MARKET

The well-known British national tendency is to purchase a car of domestic manufacture to assist home industry. Further, the high rate of horsepower taxation and the relatively high cost of upkeep and operation prevalent in all parts of the country have been chiefly responsible for development by British manufacturers of the many light types of economy cars now on the market and the popularity which these cars have attained. Price and other considerations being equal, the British motorist, therefore, will purchase a British car.

But there is a section of the market into which the American car penetrates and meets with much success. This may be briefly described as that section of the buying public desiring medium and high powered cars of excellent appearance and performance but selling at a relatively low retail price. In this field the American car stands practically alone in the British market, and it is on that basis that a substantial volume of yearly sales is attained by many popular types. Despite reductions by British manufacturers to the point where car prices in general are now 47 per cent below pre-war prices, they are still unable to compete in price with American six and eight cylinder cars and give the same value for the money.

American cars do not, of course, penetrate into horsepower categories lower than 16. But starting with 16 and in horsepower categories continuing up to 40, American cars account for a large proportion of all makes on the British market. The following statement shows the proportion of American cars to all other makes, according to horsepower:

14 horsepower, approximately, one-twelfth.
17 horsepower, approximately, one-half.
18 horsepower, approximately, one-third.
20 horsepower, approximately, one-half.
22 horsepower, approximately, two-thirds.
24 horsepower, approximately, one-third.
26 horsepower, approximately, four-fifths.
28 horsepower, approximately, three-fourths.
29 horsepower, approximately, all.
30 horsepower, approximately, four-fifths.
32 horsepower, approximately, one-fourth.
34 horsepower, approximately, three-fourths.
36 horsepower, approximately, one-half.
37 horsepower, approximately, one-third.
40 horsepower, approximately, one-half.

As previously noted, there are 32 different makes of American cars on the British market at present, an evidence in itself that a good demand is not lacking. Sales totals for a few of the most popular makes reach 3,000 to 5,000 cars annually in the low-price range and 200 to 300 annually in the more expensive cars. Naturally these figures have not been maintained year in and year out, but they were reached on several occasions by the same companies since the boom period of 1920.

The attitude of the public in general toward American cars is favorable, and the desire, which is a national characteristic, to obtain the greatest value for expenditure has created and maintained a good market for American vehicles. There seems little doubt that American manufacturers could also obtain a fair share of the British ultra-light car market should they ultimately decide to engage in that type of manufacture.

## AUTOMOTIVE PREFERENCES

Although a wide variety of American cars are already well known in Great Britain, a large percentage of the imports are of chassis only on which bodies are constructed locally to meet British conditions and preferences. Standard American bodies, especially of the older types, meet with sales resistance on the ground that they do not conform to these local requirements. This complaint has been overcome to some extent since the introduction of the all-steel body, and the newer types of American closed cars are also more suitable to British requirements. Nevertheless, local body building on imported chassis still represents an important factor in the market. A large number of firms specialize on this class of work, in addition to building special bodies for many of the British chassis makers. The following preferences, both as regards body types and chassis details, have been selected therefore with a view to giving the American automotive exporter an understanding of the more important particulars.

## BODY TYPES

The "all-weather" car is still a very popular type. This car has a collapsible top—leather being used on the higher-priced vehicles and fabric on the cheaper ones—which when dropped back gives the vehicle an open appearance and when raised the effect of a closed car. The straight, open car, without such a top, has been steadily declining in popularity in recent years, and the "all-weather" type has taken its place. The most recent development is, of course, the greatly increased popularity for the sedan and limousine type of permanently closed car, and practically all of the leading British manufacturers have followed the American tendency in this respect. The increased popularity for "all-weather" and closed bodies may be attributed directly to climatic conditions, and it is surprising that such types have not come into general use even more rapidly. The principal reason for the continued success of the all-weather body, as opposed to the permanently closed types, is again attributable to climatic conditions. The all-weather body when closed is found to be ideal for wet weather, which prevails during the major portion of the year, while during the short summer season the top can be lowered and give the owner the advantage of an open car.

## BODY FINISH

Black or dark-blue colors are in vogue only on the high-priced cars where conservative colors meet the more dignified demands of purchasers. On light cars and lower-priced heavy cars brighter colors are used, maroons, yellows, reds, and even greens being popular. It is difficult to assign the reason for this preference, other than the fact that the British buyer usually prefers a car of distinctive or individual color and not a stock shade, and domestic manufacturers are liberal in catering to these tastes. Nickel trimmings are very much in demand, and for this reason some of the imported American cars have the radiator hoods and all visible metal parts nickeled before the cars are placed with dealers.

Front seats of the sliding individual bucket type are in general use, while in vehicles carrying four or more passengers the British taste is for deeply inclined rear seats and ample leg room. Real-

leather upholstery is preferred to fabric materials, especially in the higher-priced cars.

## CHASSIS DETAILS

The topography of the whole of Great Britain is such as not to require any special gear ratio on automotive vehicles. The ordinary gearing of American cars is ideally suited to the country; in fact, American cars can be used with less changing of gears than most British makes. British cars usually have three or four speeds forward and reverse, and in mountainous or hilly country it is necessary, owing to the gear ratio, to frequently change gears.

Magnetos are in general use, but some domestic manufacturers allow the purchaser an option for battery ignition if desired. On the American cars marketed in Great Britain battery ignition is in general use. Magneto ignition is used on 99 per cent of the trucks sold in the market, battery ignition being extremely rare on such vehicles.

## ROAD CLEARANCE

The road clearance followed in British motor construction ranks as medium. Universally good roads make unnecessary a high road clearance, and for that reason British vehicles are usually slung lower than in the United States. Medium clearance is regarded in the British automotive industry as giving much better roadability.

## WHEELS

For passenger cars the most popular type is the wire wheel, wheels with steel spokes following as of next importance. Wood, or artillery, wheels are not very popular. There is a growing preference for disk wheels, but the types used are somewhat different from the American, consisting of a wire wheel fitted on the outside with a steel disk to keep the spokes clean. Wheels with solid steel spokes are preferred for trucks, although steel wheels with hollow spokes are used to some extent. Wood wheels have a very limited use on trucks in the British market and are only found on the cheaper vehicles.

## TIRES

The preference is decidedly for low-pressure tires for use on passenger cars. The type most in demand represents a tire halfway between the balloon and the high-pressure tire. Full balloon tires have not been popularized in Great Britain. At the same time the extremely high-pressure tire is not liked. On trucks and other commercial vehicles solid tires are in general use, although pneumatics are gaining in popularity for busses and coaches. Until recently busses and coaches in the London area were prohibited by the licensing authorities from using pneumatic tires, as they were considered dangerous in congested districts; the police regulations in this respect have been modified, however, and now permit the use of pneumatic tires in the London area.

In the smaller cities and provincial districts the use of pneumatic tires on trucks and busses has steadily gained ground during recent years.

## ACCESSORY EQUIPMENT

Until a few years ago extra or special accessories were not supplied on British cars as standard equipment. To-day the reverse is true, and most cars are placed on the market by manufacturers and dis-

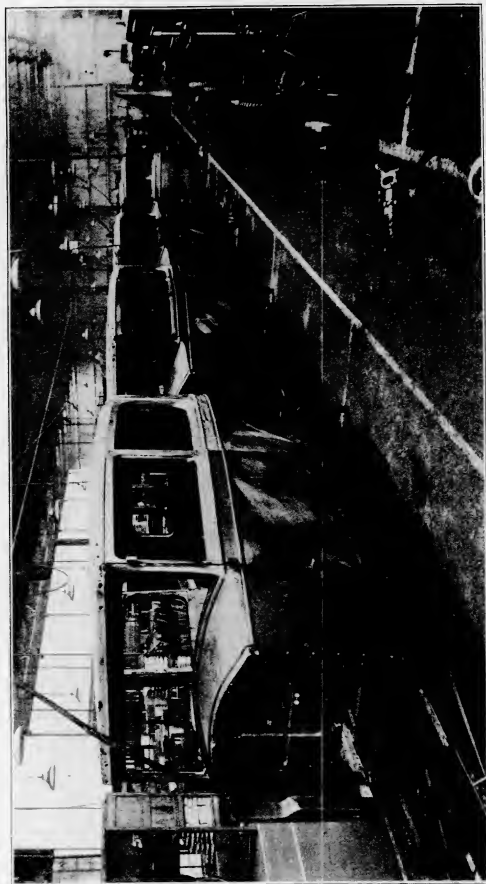


FIG. 7.—Body assembly line in an American branch plant in England

tributors fully equipped with popular accessories. Self-starters are in general use, and most cars are now equipped with motor meters, rear-view mirrors, speedometers, rear stop signals, and step pads. Spare tires are fitted to 100 per cent of the cars sold. Bumpers have not yet come into general use and are never fitted as standard equipment by British makers. On the other hand, the almost universal equipment of American cars with front and rear bumpers has created a growing demand for them in the British market, and sales by importers and a few domestic manufacturers are steadily making headway. Four-wheel brakes are now standard equipment on practically all new cars put on the market, British and imported alike.

#### MARKET FOR AMERICAN PARTS, ACCESSORIES, AND GARAGE EQUIPMENT

##### PARTS AND ACCESSORIES

Great Britain imports annually large quantities of parts and accessories for automotive vehicles, the major portion of which are retained for home consumption.

##### VALUE OF BRITISH IMPORTS AND REEXPORTS OF PARTS AND ACCESSORIES

Year	Imports	Reexports
1924 .....	£3,371,031	£381,421
1925 .....	2,734,253	323,235
1926 .....	2,798,222	158,398
1927 (10 months, January to October) .....	2,610,171	137,389

In the case of automotive parts, engines, axles, bearings, transmission chains, wheels, rims, and spokes constitute the major items imported. Accessories are not classified individually in the customs returns, thus making it impossible to tell which items predominate in the import trade. It may be estimated, however, that a division of the figures in the foregoing table should be approximately 75 per cent to component parts and 25 per cent to accessories. Of the total imports more than 50 per cent originate in the United States. France is the second largest source of supply.

Although the import trade is substantial, as the figures show, British domestic manufacture of parts and accessories is highly developed, and competition is consequently severe. The value of British production of these items is shown by the last census, which was for the year 1924, as £14,357,000 compared with £2,042,000 in 1912. Dealers state that imported component parts sell strictly on a price basis, which is rendered more difficult to adjust in view of a 33½ per cent ad valorem duty. Several of the well-known American engine manufacturers have their own English branches for taking care of the market requirements.

During recent years British manufacture of accessories has developed to such an extent that domestic makes can now provide practically everything needed by the car manufacturers. Thus, novelty and advantageous price have come to be deciding factors in the sale of imported lines. Such standard articles as spark plugs, piston rings, carburetors, shock absorbers, spotlights, windshield wipers, hand tire pumps, horns, jacks, batteries, and windshield cleaners are all pro-

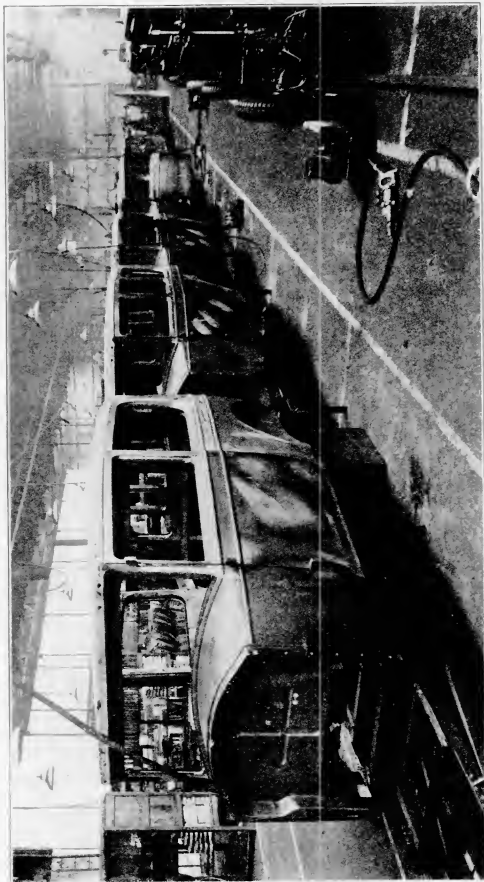


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duced locally and in sufficient quantities to meet the requirements of car manufacturers. Certain well-known American makes among some of these lines are sold by general importers and dealers in Great Britain, but mainly for use or replacement on American cars.

The idea is general, on the other hand, that new accessories or improvements originate mainly in the United States, and dealers in Great Britain are ever on the alert to acquire distribution for such lines.

#### GARAGE AND SERVICING EQUIPMENT

For many of the lines under this heading Great Britain offers an excellent opportunity, and most of the modern equipment found in British garages is of American manufacture. However, a few well-known domestic firms are producing what is regarded as excellent service machinery, such as breakdown equipment, compressors, engine stands, axle stands, jacks, and cranes, their products being modeled on American standards.

The items of such equipment principally imported from the United States are breakdown equipment, ambulances, towing poles, cranes, special garage jacks, presses, axle stands, engine stands, crank-case bearings, rebarbbiting and boring machines, air compressors, electric drills, and electric valve grinders. Practically no British imports of garage equipment originate in countries other than the United States.

Inquiry among the trade develops the opinion that, aside from the items mentioned, there is considerable need of such additional special tools as cylinder boring machines, welding outfits, high-pressure grease-gun equipment for servicing cars fitted with special types of lubrication, together with all those special tools that have been developed in the United States for the rapid and sound overhaul of motor-car axles, gear boxes, etc. The type of work done by specialized equipment of this nature is rarely, if ever, undertaken by service stations in Great Britain.

In addition to the equipment mentioned in the foregoing list there is also a wide market for such items as electric air compressors, portable drills, and electric valve grinders.

In the past one of the particular arguments against the sale of power-driven equipment in English garages has been the low cost of hand labor. Gradually garages and the larger dealers are recognizing the fallacy of this contention, and as the superiority of work done by well-designed tools becomes apparent the trade is being won away from the old-time standard of handwork.

With respect to trade channels through which garage and servicing equipment are marketed in Great Britain, it is practically impossible to sell through the motor-car manufacturers, since the latter do not appear to be interested in advising their dealers regarding the class of material they should use; nor is selling through a jobber, as the term is used in the United States, regarded as a satisfactory medium. Best results are obtained through the appointment of an exclusive agent who will carry adequate stocks and advertise sufficiently in the trade press, as well as circularize garages. Sales in practically every case must be made direct to the garage proprietor. It has been found in many cases that two years is not too much to allow for popularization of a given tool or piece of equipment. Once the garage owner's interest has been aroused inquiries flow in to the

agents, and these inquiries eventually develop into definite orders for equipment.

Owing to the method of distribution described above, British domestic credit terms must almost invariably apply, since no equipment is purchased by the garage owners direct from the manufacturer abroad, and agents must arrange credit terms to suit individual requirements.

"Cash with order" has been the rule with the principal agents in the past, but there is an increasing tendency to allow deferred-payment terms to responsible garage proprietors on a basis similar to that on which cars are sold.

#### TRUCKS AND COMMERCIAL VEHICLES

The growth in the use of road motor transport for both merchandise and passengers throughout the whole of the British Isles has been one of the great postwar developments.

At the close of the war large numbers of surplus army trucks were available for sale to the civilian public, and these were disposed of at prices so low as to seriously interfere with the manufacture and sale of new trucks over a period of three or four years. Undoubtedly, however, these surplus army trucks, obtainable even after reconditioning at only a fraction of their original cost, played a considerable part in accelerating the movement of the road motor transport idea.

The topography of the country comprising compact areas of urban centers, near together and connected by good roads, further constituted a made-to-order condition for the development of motor-vehicle transport. There seems little doubt that the development would have been on an even greater scale but for the fact that the country is served by a network of excellent railway and canal facilities, to the efficient working of which the public has been accustomed over a long period of years.

Competition between rail and road transport has consequently reached a stage of open warfare. The present law does not grant railways full powers to operate road motor transport but does allow them to operate "feeder" services for both passengers and goods. The railways are, of course, putting forth every effort to obtain full powers, while the existing road motor transport interests are opposing the issue with equal vigor as a measure of self-protection.

To-day practically every large industrial firm in Great Britain owns a fleet of motor trucks. The same is true of all firms engaged in distributive trades—department stores, bakers, confectioners, brewers, dairies, etc. In addition, the country is well supplied with firms and organizations which specialize in motor transport on a nation-wide basis. Municipal government authorities also engage in a large amount of motor haulage for municipal purposes and operate bus services, fire-fighting services, ambulance facilities, street-cleaning apparatus, and the like.

The growth in the use of motor transport vehicles is clearly illustrated by the registration figures. The figures in the following table apply to Great Britain only and do not include Ireland.

## REGISTRATION OF MOTOR TRUCKS AND COMMERCIAL VEHICLES IN GREAT BRITAIN

Year	Trucks	Hackneys (includes busses, taxicabs, etc.)	Year	Trucks	Hackneys (includes busses, taxicabs, etc.)
1913.....	37,000	36,000	1923.....	181,000	86,000
1914.....	47,000	31,000	1924.....	210,000	94,000
1919.....	38,000	47,000	1925.....	232,000	96,000
1920.....	66,000	75,000	1926.....	260,000	101,000
1921.....	135,000	76,000	1927.....	273,000	96,000
1922.....	159,000	78,000			

British domestic production of trucks and other commercial vehicles for four recent years has been as shown in the following statement:

1923.....	21,604
1924.....	26,532
1925.....	32,000
1926.....	41,500

No statistics are available prior to 1923 showing truck production separately from other motor vehicles.

The domestic truck industry is assisted in a number of ways. The War Department grants a substantial subsidy to 30 and 15 hundredweight trucks built to meet its specifications and have issued approved specifications for an acceptable type light six-wheeled truck. Manufacture of such vehicles must, of course, be entirely British, and most of the local producers have designed vehicles to meet the requirements. Municipal authorities also purchase domestic-made vehicles, to the exclusion of all other makes, and many of the large British firms will not buy imported trucks. Further, in April, 1927, an import duty of 33½ per cent was imposed on commercial motor vehicles, which had hitherto not been dutiable. It is not surprising, therefore, that the import trade in complete trucks and other commercial vehicles has dropped to the small proportions shown in the following table:

## BRITISH IMPORTS OF COMPLETE COMMERCIAL VEHICLES

Year	Number	Value
1924.....	1,319	£174,556
1925.....	655	113,339
1926.....	708	117,190
1927 (10 months, January to October).....	115	20,084

Approximately 60 per cent of the vehicles represented in the foregoing table were imported from France and Italy, the remainder originating in the United States, Canada, and other producing countries.

However, the British market absorbs annually a considerable quantity of imported chassis, a substantial proportion of which are used for trucks, vans, and busses, the bodies being built locally to suit requirements or the purchaser's individual need.

## BRITISH CHASSIS IMPORTS

Year	Number	Value
1924.....	12,459	£1,757,902
1925.....	15,778	2,206,898
1926.....	10,436	1,401,269
1927 (10 months, January to October).....	11,412	1,530,625

Of the chassis imports, the United States and Canada supply considerably more than half, France being the second largest contributor and Italy third.

One low-priced American truck, now made in England, has been one of the most important factors in supplying the British demand for light and medium weight vehicles. At least three other makes, now assembled in England, have likewise enjoyed substantial sales. But the demand for light truck chassis has also been met by a number of British makers during recent years, so that the position is now highly competitive.

Except for a relatively few imported makes—two or three American, one French, and one Swiss—the British market for heavy-duty trucks is supplied entirely by domestic manufacturers. In this field the importer finds it difficult to compete in price, particularly since the duty was imposed.

## TAXICABS AND BUSES

Owing to the remarkable extension in bus services, the use of taxicabs has naturally declined, although they still represent one of the major and important means of transportation in cities and suburban areas. About 60,500 taxicabs are in operation throughout the country. London, as the principal center, uses between 10,000 and 15,000 of this total, Manchester, Birmingham, Liverpool, and Glasgow being the other main consuming cities. Fares in London are at present fixed at 9d. for the first mile, and 3d. per mile thereafter, while in other cities the usual minimum fare is 1s., in some cases (Manchester for example) 1s. 6d. Cab ownership is principally in the hands of individuals, and purchase on the installment plan is a general practice, £700 representing the average price.

British makes of taxicabs predominate, although one French make of chassis (Unic) is used extensively in London and southwest England, the bodies being manufactured in Great Britain. One American make was introduced in London about three years ago, but sales efforts were discontinued after a brief period.

With respect to busses and bus operation, an interesting and important situation now exists. Motor-bus development in Great Britain has proceeded more rapidly and reached a higher state of efficiency than in any other country, except perhaps the United States. In London, and all principal cities and towns throughout Great Britain, motor-bus services are operated between principal centers and on all main thoroughfares within the city limits. In addition, cities and towns are connected by motor-bus services to an extent not found elsewhere. Thus, Great Britain may be visualized as a country covered with a network of bus services, operated on definite time schedules and at fixed fares or rates, and representing one of the most, if not the most, popular means of passenger transport for short-distance traveling. These facilities are being extended at so rapid a

rate that it is now possible to travel the length and breadth of the country without using other means of transportation. The latest figures reveal a total of approximately 30,000 busses of all types registered throughout the country.

The universally good roads, nearness of one thickly populated urban district to another, and all within a comparatively compact area, have, of course, been important contributory factors to this development. Others are the economical fares charged and the excellence and comfort of the rolling stock. Often fares are lower than ordinary rail rates, and in towns served by tramways the bus companies generally find it necessary to charge higher fares than those ruling on the trams in order that the latter may be protected. It is a common experience, however, to find that even when fares are higher the traveling public prefers the busses.

Busses in use are of various types and seating capacity, but, in general, the following distinctions may be made: For operation in London, Birmingham, Manchester, Glasgow, and other large cities

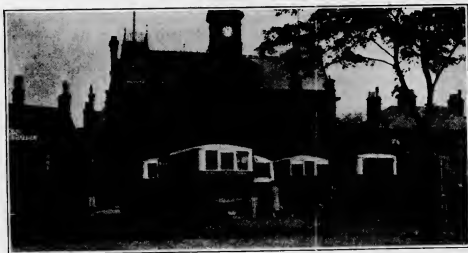


FIG. 8.—A provincial bus terminal

double-deck busses, similar to those used in New York City, with seating capacity for about 50 persons, are most popular. These busses have entrance and exit at the rear only, and stairs at the rear leading to the upper deck. A four-wheeled chassis, with solid tires, is used on such types. In smaller towns and certain of the large cities, and for country services, covered single-deck busses are the rule, with seating capacity for 32 to 40 persons. These busses may have only one exit, either front or rear, or both front and rear doors, depending upon the regulations of the local government authority which has the right to specify requirements for its particular district. Four-wheel chassis on pneumatic tires are used mainly on these types.

Double-deck busses, with the upper deck wholly covered by a permanent top, have also been used quite extensively in the larger provincial cities for several years. It is only recently that their operation in London has been permitted under license by Scotland Yard, which authority previously ruled them out as top-heavy or unwieldy, and therefore dangerous in the London metropolitan area. A test of these vehicles, however, proved them so satisfactory and popular with the public that the ban has been removed. To-day there are about 1,500 busses of this type used in London services.

As the most outstanding recent development in British bus construction and operation, two features may be selected. These are the six-wheel, pneumatic tired, all-enclosed, double-deck busses, used chiefly for city services, and the luxury type of single-deck saloon bus for use on limited-stop, long-distance services.

In London operation of these new double-deckers was inaugurated by the London General Omnibus Co. and the recently formed London Public Omnibus Co., a combination of a number of small bus companies and independent operators which have sprung up since the war. These busses are chiefly noted for their large seating capacity. They are designed to seat 62 or 68 passengers, divided about equally between the two decks, their number being just double the capacity of the busses in service eight years ago. Aside from the six-wheel chassis on pneumatic tires, all-enclosed upper deck, wide and fully upholstered seats, and sliding glass window, other special features of these vehicles include extremely comfortable riding qualities and fast acceleration.

Omnibusses of similar design have been licensed for operation on provincial services for some time past, in districts where local government authorities have permitted their use. London has been somewhat delayed in the use of double-deck six-wheelers, awaiting decision of Scotland Yard as to their general fitness for London work. So far as the public is concerned, hearty indorsement of the all-enclosed double-deck bus has been given in the form of ever increasing patronage. These busses have proved ideal in cold and rainy weather, and operating companies have increased their earnings by 3d. (6 cents) per mile with covered busses over vehicles of the same size without covered upper decks.

Limited-stop, long-distance bus services represent quite a new development in British bus operation. These services are now established between London and many provincial towns and between provincial towns themselves. They are usually run on the principle of "all seats booked in advance," by which means they do not come within the "ply for hire" laws, and consequently need not be licensed by local government authorities. The bus owner need only pay his excise license—that is, the national tax based on seating capacity.

Here, again, fares are usually lower than ordinary full rail rates, and the services have become extremely popular during the past two years.

The equipment used is of the latest recognized saloon bus design, the cars being distinguished by their more luxurious appointments compared with ordinary busses. In some cases toilet and buffet accommodations are provided. Up to the present time four-wheel chassis, with pneumatic tires, have been used most widely for busses of this type. British makers have studied the design of luxury busses in the United States and elsewhere to insure that these new types combine the most modern ideas for saloon-bus construction.

Although by far the larger number of chassis used for bus construction in Great Britain are of British manufacture, American bus chassis have also been popular for the construction of this particular type of bus. Complete American busses would not be salable in England unless manufactured to special requirements, and then prices would have to be extremely low to compete.

rate that it is now possible to travel the length and breadth of the country without using other means of transportation. The latest figures reveal a total of approximately 30,000 busses of all types registered throughout the country.

The universally good roads, nearness of one thickly populated urban district to another, and all within a comparatively compact area, have, of course, been important contributory factors to this development. Others are the economical fares charged and the excellence and comfort of the rolling stock. Often fares are lower than ordinary rail rates, and in towns served by tramways the bus companies generally find it necessary to charge higher fares than those ruling on the trams in order that the latter may be protected. It is a common experience, however, to find that even when fares are higher the traveling public prefers the busses.

Busses in use are of various types and seating capacity, but, in general, the following distinctions may be made: For operation in London, Birmingham, Manchester, Glasgow, and other large cities

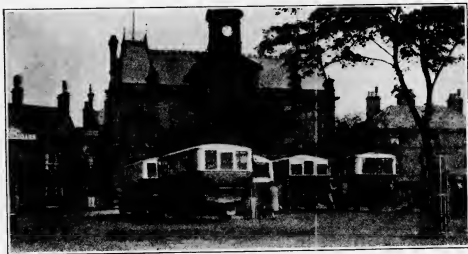


FIG. 8.—A provincial bus terminal

double-deck busses, similar to those used in New York City, with seating capacity for about 50 persons, are most popular. These busses have entrance and exit at the rear only, and stairs at the rear leading to the upper deck. A four-wheeled chassis, with solid tires, is used on such types. In smaller towns and certain of the large cities, and for country services, covered single-deck busses are the rule, with seating capacity for 32 to 40 persons. These busses may have only one exit, either front or rear, or both front and rear doors, depending upon the regulations of the local government authority which has the right to specify requirements for its particular district. Four-wheel chassis on pneumatic tires are used mainly on these types.

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Judged on the basis of the present general interest in six-wheeled, all-inclosed, double-deck busses for city services, and single-deck sa on busses for long-distance travel, future development of bus operation in Great Britain will require increasing numbers of these types of vehicles.

That bus operation is profitable is shown by the fact that the London General Omnibus Co. paid a 6 per cent dividend for 1926, and dividends of 10 to 15 per cent are common with some of the large private bus companies operating services in the provinces.

A difficult and peculiar position, which must be met, has arisen through the fact that "ply for hire" licenses are granted by local government authorities who themselves are often operators of trams and busses; hence, impartial consideration to applications of private companies to operate bus services is out of the question. But if an applicant is refused a license he may appeal to the Ministry of Transport, who conducts an inquiry and either offsets or sustains the local authority. In 1926 there were 124 such appeals.

Further, a licensing authority has powers to insist on certain constructional requirements and can stipulate routes to be followed and approve fares and time-tables. In the past much confusion has existed because these requirements of licensing authorities vary. But to obviate this difficulty a standard set of constructional requirements has been recommended by the Ministry of Transport and when adopted should prove a further stimulus to the bus industry as a whole.

Some authorities point out that the rigid requirements laid down by Scotland Yard and many provincial licensing authorities have in reality had the effect of assisting British bus construction and operation to reach its present state of high development rather than to act as a deterrent. Such regulations, bearing on weight in particular and dimensions generally, have resulted in safe and comfortable vehicles, which are also economical to operate.

Progress is being made in linking up the services of one bus-operating company with those of another, so as to admit of continuous travel over long distances. It is to this scheme that the new luxury type of saloon bus is admirably adapted, and considerable expansion of such facilities is to be anticipated in the future in Great Britain. A combine, known as the British Automobile Traction Co. (Ltd.), which controls a large number of the larger provincial companies, is already giving joint bus connections at termini, and other interests will undoubtedly follow their example as fast as conditions warrant.

#### MOTOR CYCLES

As has been stated, more motor cycles are manufactured and used in Great Britain than in any other country. As an industry it ranks well up in importance among engineering trades, is prosperous to a high degree, and supplies not only the home market—almost to the exclusion of imported motor cycles—but maintains a large export trade to practically all countries where motor cycles are in use.

The following table shows the increase in registration, production, and exports, and also the small dimensions to which the import trade has declined during eight recent years in Great Britain.

#### REGISTRATION, PRODUCTION, IMPORTS, AND EXPORTS OF MOTOR CYCLES IN GREAT BRITAIN

Year	Regis- trations	Pro- duction	Net im- ports (im- ports minus re-exports)	Exports (British- made motor cycles)
	Number	Number	Number	Number
1919	114,722	65,000	1,481	8,368
1920	287,739	100,000	1,277	21,285
1921	373,200	80,000	2,150	8,118
1922	377,963	60,000	963	7,202
1923	430,138	80,000	1,011	16,002
1924	495,579	110,000	402	37,047
1925	538,911	120,000	867	46,612
1926	628,955	120,000	75	48,391

The demand for motor cycles is fairly constant the year round, although the period just preceding the London cycle and motor cycle show in November, when new models are expected and price changes imminent, and also the cold weather months of December, January, and February constitute the slack-sales season.

There are three main reasons for the continued popularity of motor cycles in the British market. The universally good roads throughout the country, together with their comparative narrowness, makes the motor cycle a convenient form of transport during practically the whole year.

Secondly, motor cycles still supply the substantial demand in Great Britain for a motor vehicle even lower in price than the cheap car. Automobiles are practically 50 per cent more expensive in Great Britain than in the United States and still rank among the luxury possessions. For this reason they have not up to the present time superseded the motor cycle as a sport as well as a general utility vehicle. There is no car on the market selling now below £100, but the average retail prices for motor cycles for 1927 were as follows: 2½ horsepower, £36; 3½ horsepower, £43; 6 horsepower, £70; 7 horsepower, £75.

The third chief consideration is the extent to which motor cycles are used commercially. Large numbers of machines, both with and without side-car attachment, are used by department stores, the post office, and other organizations for speedy distribution of light parcels.

While there are more than 100 British makes of motor cycles, not more than 10 manufacturers are of outstanding importance as far as their volume of output is concerned. The principal makes in their order of popularity are as follows: B. S. A., Triumph, Douglas, Matchless, Norton, A. J. S., Humber, Raleigh, Rover, Sunbeam.

These firms produce the bulk of the yearly output, and some of them manufacture light automobiles or bicycles, or both, in conjunction with motor cycles.

The remainder of British motor cycle manufacturers, most of whom turn out not more than a few hundred machines during the course of the year, are makers of automobiles or other lines of engineering specialties, carrying on the manufacture of motor cycles as a side line and not as the major item of their production.

Of the relatively few motor cycles imported the United States supplies about 50 per cent. France is the second largest supplier,

the other imported makes being Belgian, Italian, and German. Some of the American makes are held in high repute for their cleanness of design and finish, comfortable riding qualities, high speeds with plenty of reserve power, and quick acceleration. The price factor, however, is against American and other imported machines, since, after payment of the 33½ per cent import duty, they are unable to compete with the price of well-known domestic makes. Furthermore, the major demand in Great Britain is for the small design of motor cycle of low horsepower and economical fuel consumption. The majority of the American machines sold in Great Britain are of high horsepower and expensive, and therefore appeal mainly to the sports class of purchaser. Approximately 75 per cent of the motor cycles in the market are small machines of from 2½ to 3½ horsepower.

Considering the extent to which the British manufacturer controls the home market in motor cycles, it is difficult to offer suggestions which would be helpful to the American manufacturer in enlarging his distribution in the British Isles. The American machines now on the market are distributed by firms which should be fully capable of giving the sort of service required by the manufacturer. In two cases the American manufacturer has his own branch organization in London. Undoubtedly, if the American producer could lower his price it would have the effect of placing American motor cycles in a more competitive position. It is equally if not more important, however, that the price of spare parts be reduced, and that agents be required to keep on hand at all times a sufficient quantity of spare parts and accessories to take care of the needs of purchasers of American motor cycles throughout the British Isles. British manufacturers make a special feature of service and repair. Great Britain is a small country, and machines can be returned to the factory for necessary overhaul and sent back to the purchaser within a reasonably short time. This is another reason why American makes find it difficult to compete, since their distributors are not in such advantageous position to give attention to service.

Until recently all motor-cycle business has been undertaken on a cash basis. Competition between British manufacturers, however, has become so keen that dealers throughout the country are granted credit facilities. Since the supplying to dealers of motor cycles on consignment, or on sale or return basis, is prohibited by the rules of the British Cycle & Motor Cycle Manufacturers & Traders (Ltd.), British manufacturers supply dealers early in the season with as many machines as they will take, dating the invoices July 1, and for such machines as are unsold on that date a new invoice is submitted dated further ahead. It is the usual practice of the American manufacturer to sell "cash against bill of lading, New York," and distributors in Great Britain complain that this method forces upon them the entire burden of financing, which, due to limited profit, places them at a disadvantage in comparison with British motor-cycle dealers.

Up to the present time only one or two of the American firms represented in the British market have been able to give a service as satisfactory as most of the British manufacturers.

It is practically certain that more sales and consequently a larger turnover and additional profit could undoubtedly be made if American producers concentrated on sales of their lighter models in the

British market. It is the motor cycle which comes within the purchasing range of the clerk and the professional man, such as doctors, dentists, and lawyers of the less wealthy classes, which stands the best chance of wide distribution. Solo machines with a pillion seat for the second passenger are more popular than side-car combination, although the latter are used in many cases as a means of family transportation when the owner is unable to purchase a motor car.

Some of the more successful distributors of American motor cycles in the British market particularly stress the fact that American manufacturers should cooperate in inducing the magneto and carburetor makers to provide for service facilities in Great Britain. At present such service is practically nonexistent, and when anything goes wrong with the magneto or carburetor on the American motor cycle the distributor often meets with great difficulty in effecting repairs.

It would also be beneficial if the American manufacturer would follow the practice of quoting prices to his British distributor as "f. o. b. steamer" and not "f. o. b. factory, packing at cost," as is now the usual custom. On an "f. o. b. steamer" quotation the distributor can figure exactly what his price must be to the prospective purchaser. When an "f. o. b. factory" quotation is given, the British distributor has no easy way of estimating the cost of inland freight in the United States or of determining the amount chargeable to "packing at cost," and to cover himself in safety more often than not adds more to the factory quotation than is justifiable and places his price to the prospective buyer outside the competitive range.

A considerable amount of motor-cycle racing is undertaken from a sports standpoint only. From the commercial point of view, also, motor-cycle racing is regarded as extremely important as a sales stimulus and, under the auspices of various motor-cycle clubs and organizations, as well as the British Cycle & Motor Cycle Manufacturers & Traders Union (Ltd.), a number of important races and tests are held annually. The success at these races of any particular type of machine is often the key to large sales of that make for the following season.

In general, it may be said that Great Britain can not be regarded as a really important market for American or any other foreign make of motor cycle. Domestic competition is too keen, prices are too low, and service maintenance of domestic producers too well organized to admit of serious foreign competition at present or to anticipate it for the future. Those American machines distributed in Great Britain are held in high esteem, and little or no criticism is offered by the trade or the public respecting their performance and durability. Price is the chief prohibiting factor. The position may be summed up, therefore, by the statement that there will always be a limited market for American motor cycles in the British Isles where the purchaser desires certain additional advantages which the American machines possess and is not chiefly swayed by low-price consideration.

#### CONSTRUCTIONAL AND OPERATIONAL REGULATIONS

All motor vehicles must be registered and licensed before they can be operated in Great Britain, with the exception that motor fire engines, vehicles used by local or municipal authorities for fire-brigade

purposes, road rollers, and ambulances are exempted from paying the fees. They must, however, be duly registered and licensed by the municipal authority within whose area they are kept and used. The fees chargeable against all other vehicles are given in the appendix at the end of this report. In the case of passenger cars and trucks, licenses must be obtained from the licensing authority of the district in which the owner resides but are good for travel anywhere in the country. For public-service vehicles—taxicabs, busses, etc.—a license is required from the licensing authority of each district in or through which the vehicle operates and collects fares.

Rules and regulations affecting the operation of motor vehicles are complex and elaborate and differ considerably between various parts of the country since requirements differ considerably as between separate licensing authorities. However, registration and licensing requirements, so far as they are affected by vehicle constructional details, are uniform for England and Wales, and vary only in minor instances for Scotland, Northern Ireland, and the Irish Free State.

In general, however, British regulations concerning motor-vehicle construction do not demand any important changes in American passenger cars, trucks, or motor cycles. Right-hand drive is required, since the rule of the road is to the left throughout the British Isles, but this is a legal requirement only in the case of public-service vehicles. Passenger cars with left-hand drive are brought into the country by tourists and others, but all vehicles to be placed on the market must have the steering changed to the right-hand side before they are salable. All American and other imported vehicles on the market are altered in this respect. British law requires that the right front lamp be placed over the right wheel, so for the sake of appearance domestic manufacturers fit a small lamp mounted on the fender directly over each front wheel, these lights being in addition to the usual headlights. When American cars are not equipped with these fender lights, importers must fit them before the cars can be put into service. The law also prescribes that "No lamp carried on a motor car may be constructed, fitted, or attached so as to enable the light exhibited by it to be moved or to be used as a searchlight." Spotlights, now so commonly fitted as standard equipment in the United States, are definitely prohibited in Great Britain.

In other respects American passenger cars and trucks conform to British requirements, and it is not necessary here to quote particulars from the large mass of British motor-car legislation. Should any question or uncertainty arise over some particular point, information can readily be obtained from the Bureau of Foreign and Domestic Commerce, Department of Commerce, Washington.

With respect to large and heavy motor vehicles, British regulations have recently undergone considerable revision and are more stringent than formerly. The details are contained in the "Heavy motor car (amendment) order, 1927," dated August 11, and fix limits for the first time to the over-all length and the amount of overhang of all heavy motor cars, and also prescribe the turning circle and the clearance of under parts of heavy motor cars used as public-service vehicles. The order is a lengthy one and should be studied by any manufacturer desiring to place heavy busses, coaches, trucks, or chassis thereon on the British market. The following extract gives the principal details laid down for chassis requirements, but in addi-

tion the order prescribes minutely for body construction and equipment items:

The order prescribes that, in general, the over-all length of a heavy motor car shall not exceed 27 feet 6 inches, and that a heavy motor car which exceeds 26 feet in over-all length shall not draw a trailer.

The requirements in respect of the construction and design of the brake equipment of heavy motor cars have been made more stringent. Special provisions with regard to brakes have been made to apply to rigid-frame six-wheelers. There is also a special provision requiring that in the case of a public-service vehicle one brake shall be applied by a pedal, and that the operation of either brake shall not in any case disengage the engine from the transmission gear.

More stringent limitations have been placed upon the permissible weights for public-service vehicles, the order prescribing that, in general, the registered axle weight of any axle shall not exceed 5½ tons, and the sum of the registered axle weights of the axles shall not exceed 9 tons. The corresponding axle weights for heavy motor cars which are not used as public-service vehicles remain at 8 and 12 tons, as fixed by the heavy motor car order, 1904.

*Six-wheeled vehicles.*—The general requirements as to over-all length, unladen weight, and axle weights are modified in the case of rigid-frame six-wheeled vehicles which conform to certain constructional requirements in the following respects:

- (a) The maximum over-all length is fixed at 30 feet instead of 27 feet 6 inches.
- (b) The maximum unladen weight is raised from 7¼ to 10 tons.
- (c) The sum of the registered axle weights may not exceed 12 tons for a public-service vehicle and 19 tons for other vehicles, and the axle weight of any one axle may not exceed 4½ tons in the former case and 7½ tons in the latter.
- (d) Less stringent limits are imposed for clearance of under parts.

It appears to the minister that a higher maximum laden weight for rigid-frame six-wheeled vehicles is justified on the ground that vehicles of this type, if suitably constructed, offer special advantages from the point of view of road user on account of the distribution of weight over three axles and the reduction of impact.

The order contains a saving clause to cover existing vehicles and new vehicles which are registered within a year of the commencement of the order.

#### TRADE ORGANIZATIONS AND CLUBS

While motor trade organizations have taken over, in large part, all general activities tending directly to promote automotive sales in Great Britain, the facilities offered by the principal clubs have undoubtedly contributed indirectly toward increasing the number of motorists. The two most important of these organizations are the Royal Automobile Club and the Automobile Association.

The Royal Automobile Club, founded in 1897, provides a social and restaurant club for members, a fine golf course, road guides in uniform throughout the country, free legal advice and defense, free assistance in case of breakdown or accident, free advice on technical matters, and use of the club's touring facilities at home and abroad. Most of the provincial clubs in the United Kingdom and the clubs in the Dominions and India are associated with the Royal Automobile Club, which also represents the British Empire on the international association of recognized automobile clubs.

The Automobile Association, founded in 1905, provides members with an efficient road-patrol service, free legal advice, and town and road maps and handbooks both domestic and foreign. Both of the foregoing organizations are of national scope and importance.

The most important trade organization is the Society of Motor Manufacturers and Traders (Ltd.). Under its auspices an annual passenger car exhibition and a biannual commercial vehicle exhibition are held at the Olympia exhibition buildings in London, the influence of which are widespread throughout the entire automotive industry in Great Britain. Membership of the society includes prac-

tically all British manufacturers as well as firms holding agencies for imported cars, members of the leading oil companies, insurance companies, tire companies, motor financing houses, and the trade press. Its influence and activities may, for all practical purposes, be compared with those of the National Automobile Chamber of Commerce in the United States, along the lines of which the society is organized. The following list comprises the other chief trade organizations which have substantial influence in their particular fields:

Association of British Motor Manufacturers (Ltd.). (Members are also members of the Society of Motor Manufacturers and Traders, but foreign manufacturers or their agents not admitted.)  
 British Cycle and Motor Cycle Manufacturers' Traders' Union (Ltd.). (The union organizes an annual cycle and motor-cycle exhibition held at Olympia exhibition buildings in London.)  
 British Motor Cycle and Cyclecar Research Association.  
 Commercial Motor Users Association (Inc.).  
 Institute of Automobile Engineers.  
 Institute of Motor Trade.  
 Motor Agents' Association (Ltd.).  
 Motor Legislation Committee.  
 Motor Trade Association.  
 National "Safety First" Association.  
 Research Association of British Motor and Allied Manufacturers.  
 Scottish Commercial Motor Users' Association (Inc.).  
 Scottish Motor Trade Association (Ltd.). (This association organizes the annual Scottish motor exhibition held in Edinburgh.)

#### BRITISH EXPORT TRADE

Although the domestic market has always been the factor of prime importance to British automotive vehicle manufacturers, the export trade has received greatly increased attention during the past three or four years. Special emphasis has been laid upon the desirability of widening the market in British Empire countries like Australia, New Zealand, and South Africa, where British goods receive preferential tariff consideration. Closer study has been devoted to vehicle designs more suitable for those areas than the standard British cars and trucks and considerable headway made in design alteration to suit foreign requirements.

Most of the leading automobile manufacturers in Great Britain now maintain export departments and engage in foreign trade to some extent. Except in one or two instances they do not maintain assembly plants abroad, but sell through distributors. The Morris company, however, has an assembly plant in France, and the Austin company entered into an agreement this year with a German firm for the production of the 7-horsepower Austin car in Germany. During the year 1926 British exports of cars, trucks, and chassis represented 13 per cent of the total domestic production.

British motor cycle manufacturers not only hold the bulk of the domestic market but have steadily increased their penetration into foreign markets. Exports in 1926 represented 40 per cent of the total production and was probably greater in 1927. Practically every principal manufacturer is engaged in the export trade.

The following table shows the extent to which British automotive exports have increased. The decline in car and truck exports during 1926 was attributable to the effects of the prolonged coal stoppage during most of the year.

BRITISH AUTOMOTIVE EXPORTS

	1913		1920		1925		1926		11 months January-November, 1927	
	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value
Passenger cars.....	17,595	£2,396,369	4,294	£2,995,791	17,771	£4,183,656	14,865	£3,233,510	14,441	£3,151,969
Trucks.....										
Chassis.....	1,234	465,381	3,124	941,074	1,544	881,402	1,148	568,409	1,612	1,034,730
Parts.....		733,269		2,467,080		2,847,194		3,498,899		3,578,246
Motor cycles.....	16,850	733,269	21,285	1,593,581		2,099,282		1,819,092		1,751,011
Parts.....		217,330		1,698,903	46,642	1,857,025	48,391	1,807,119	48,614	1,975,478
				658,851		1,059,501		866,981		847,204

<sup>1</sup> Passenger cars and trucks not given separately in customs figures for 1913.

As stated above, the principal foreign markets for British cars and trucks are countries within the Empire. They absorb about two-thirds of British exports. In addition to Australia, New Zealand, and South Africa, a fairly steady demand exists in British India, Straits Settlements, and the Malay States, and in the Irish Free State. In none of these territories, excepting the Irish Free State, however, do British vehicles predominate. A few British cars also find their way into every important country, but the numbers are relatively small in comparison with American exports.

British motor-cycle exports are divided about 50 per cent to Empire countries and 50 per cent to other countries of the world. Among Empire countries Australia is by far the largest market, New Zealand and the Transvaal being the next two most important. Of European countries Italy, Germany, Denmark, Czechoslovakia, Austria, Switzerland, Netherlands, and Sweden are the chief markets. Japan is likewise a substantial purchaser.

#### IRELAND

From its standpoint as an automotive market and its general tendencies and characteristics Ireland need not be dissociated from the rest of the United Kingdom. Market requirements and conditions in both the Free State and in the six counties comprising northern Ireland are similar to those in England, Wales, and Scotland. Separate tariffs and regulations have, of course, been issued by the Irish Free State Government to cover the 26 counties comprising that area, but they closely approximate the British tariffs and regulations on which they are based. Northern Ireland, still an integral part of Great Britain, is governed by British motor legislation and has no separate tariff.

Although Ireland (including the Irish Free State and northern Ireland) covers an area of 31,646 square miles, or more than one-third as much territory as Great Britain, the population numbers but 4,229,000. The country is mainly agrarian, but has certain important industries concentrated in Dublin, Belfast, and Cork and a few smaller cities. Per capita wealth is much lower than in Great Britain, and the whole potentialities of the automotive market are considerably lower than in the latter country.

Nevertheless, registration figures show that substantial progress has been made in the sales of automotive vehicles in Ireland during the past few years.

## REGISTRATION OF MOTOR VEHICLES IN THE IRISH FREE STATE

Year	Passenger cars	Taxis and cabs for hire	Trucks and busses	Motor cycles	Total
1921.....	20,473	8,322	6,003	7,788	42,586
1927.....	26,388	9,834	8,182	10,920	55,324

## REGISTRATION OF MOTOR VEHICLES IN NORTHERN IRELAND

Year	Passenger cars	Trucks	Motor hackneys	Motor cycles	Total
1921.....	3,382	1,588	1,607	5,138	11,715
1922.....	4,542	2,152	2,124	6,417	15,235
1923.....	6,342	2,960	2,782	7,859	19,943
1924.....	8,095	3,374	3,336	8,788	23,593
1925.....	10,272	4,081	3,841	9,676	27,870
1926.....	11,642	4,524	3,799	9,324	29,289

Although these figures are small, considering the size and population of Ireland, the steady increases reflect a healthy expansion that seems likely to continue. Commenting on the present situation and future prospects, the consular office in Dublin states:

The Irish market for automotive products has scarcely been scratched, and opportunities for trade expansion are widespread. The progressive settlement of economic and political conditions has served as a stimulus to automotive sales and each year presents brighter prospects to dealers in this country.

Considering the similarity between Irish and British climatic conditions, methods of motor-vehicle taxation, as well as automotive preferences, it is not surprising to find that British-made vehicles predominate in the Irish market. The British manufacturer is further assisted in his sales efforts in Ireland by proximity, and, so far as the Free State is concerned, by a tariff preferential of one-third under the full duty rate of 33½ per cent ad valorem, shipments to northern Ireland, of course, being duty free. American vehicles enjoy a popular position in the Irish market. Describing the Free State position with reference to the nationality of vehicles on the market, the American consular office at Dublin may again be quoted as giving an accurate picture of American participation:

American motor vehicles figure prominently on the Irish market and contribute largely to the registration totals. American participation is particularly noticeable in the field of passenger cars, taxis, small trucks, and busses. American passenger cars represent one-third of the total number, and the percentage of American taxis and other cars for hire approximates 80 per cent of the total number registered. An estimated percentage of American makes in registrations of trucks and busses would be less impressive, but in the lighter models of both of these classes of motor vehicles, American manufacturers have captured the greater portion of the sales.

Except for the higher price differential in the Free State, occasioned by the tariff, British manufacturers regard Ireland, to all intents and purposes, as part of the home market, and sales are made through Irish dealers selected by the home organization.

In like manner British branches of American and other importing firms establish Irish agencies and fill their requirements from the headquarters in England. By this means they are able to take advantage of the preferential duty which applies against any British materials that may be used in body construction or value of altera-

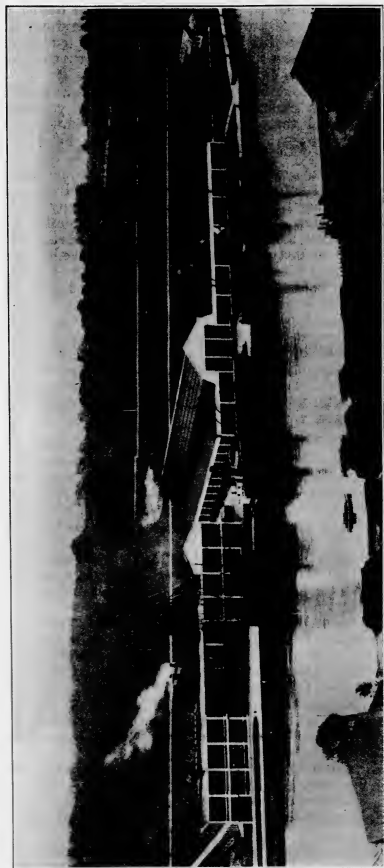


FIG. 9.—An American assembly plant in Cork

## REGISTRATION OF MOTOR VEHICLES IN THE IRISH FREE STATE

Year	Passenger cars	Taxis and cabs for hire	Trucks and busses	Motor cycles	Total
1904.....	20,473	8,332	6,003	7,788	42,596
1907.....	20,388	9,834	8,182	10,920	53,324

## REGISTRATION OF MOTOR VEHICLES IN NORTHERN IRELAND

Year	Passenger cars	Trucks	Motor hackneys	Motor cycles	Total
1901.....	3,382	1,588	1,607	5,138	11,715
1902.....	4,512	2,152	2,124	6,417	15,205
1903.....	6,242	2,660	2,782	7,859	19,543
1904.....	8,065	3,374	3,336	8,788	23,563
1905.....	10,252	4,081	3,841	9,676	27,850
1906.....	11,642	4,524	3,799	9,324	29,289

Although these figures are small, considering the size and population of Ireland, the steady increases reflect a healthy expansion that seems likely to continue. Commenting on the present situation and future prospects, the consular office in Dublin states:

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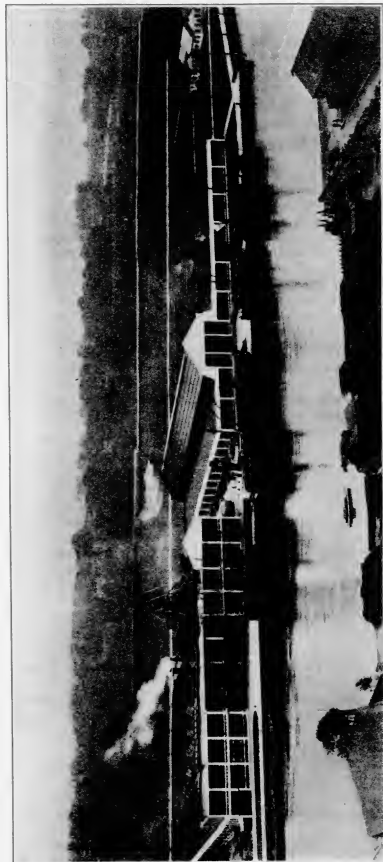


Fig. 9.—An American assembly plant in Cork

tions made to the imported car in which the use of British materials has figured. Upon reexportation from England refund is claimed or the original British duty, but no saving is effected thereby, since the full rate is again assessed by the Irish Free State customs against all portions of the vehicle of foreign manufacture.

For this reason, together with the extra cost for rehandling, the prices of American cars, as well as British, run generally higher throughout Ireland than in Great Britain. Several exceptions to this rule occur, however, the Irish price having been kept at the British level.

With the exception of one American company, which has a factory at Cork, supplying not only cars and trucks to the Irish market, but in addition building the engines used by the company at its English plant in Manchester, there is no manufacture of motor vehicles in Ireland, the market being supplied wholly by imports. But a substantial amount of body building is undertaken locally, and dealers state this feature will undergo a much greater future development.

An important field for body-building expansion lies in the motor-bus trade. Bus transportation in Ireland is being rapidly inaugurated, not only for services in Dublin, Belfast, and other principal cities, but also for long-distance routes throughout the country. British and American chassis are used principally, and up to the present time some of the bodies have been built in England. Irish coach-building firms make most of the standard bodies, however, and are now entering competition for the special types of bodies used on busses engaged in cross-country services.

### CONCLUSION

It is the purpose of this study to give a general picture of the British automotive market and in all its important aspects, rather than a detailed account of each individual trading aspect. Particular stress has been laid upon the competitive position in the home market, since it is felt that a clear understanding of this feature will best enable the American automotive exporter to decide which of his products are most likely to succeed in the British Isles.

It is clear that future competition will be increasingly severe but, in general, of a healthy nature, calculated to expand sales prospects for both British and imported vehicles.

While arguments have been made in some quarters to show that at the present rate of expansion the saturation point may be reached within the next few years, the British automotive industry itself does not accept them, holding to the policy of increased installment buying, better values for expenditure, and a plurality of vehicles per family to widen market possibilities. Other factors which assist are the present low level of tire and gasoline costs compared with prices prevailing a few years ago and decreasing garage costs as such facilities become more adequate.

American automotive products enjoy high prestige with large sections of the public, and successfully maintain an important place in the British market. With the continued use of modern and intensive selling methods now employed, this position should be maintained.

The complete British tariff schedule on automotive products, as now effective, and the present rates of motor-vehicle taxation, are included in the appendix.

## APPENDIX

### I. FORM OF CONTRACT

THIS AGREEMENT made this ----- day of ----- one thousand nine hundred and twenty----- between ----- (hereinafter called the company) of the one part and ----- (hereinafter called the distributor) of the other part:

1. The company allots to the distributor the following territory: ----- for the sale of (make of) cars to August 31, 192--, upon the terms and conditions herein contained.

2. The distributors and dealers must not canvass or advertise or sell wholesale to anyone outside their own territory. Distributors and dealers may sell retail to customers who reside anywhere in Great Britain and Ireland.

3. The distributor agrees that the schedule of cars included herein is a reasonable estimate of the quantity that can be sold under the terms of this agreement.

4. The distributor shall keep in stock during the entire period of this agreement for trial, immediate delivery, or show purposes at least (number of) (make of) cars (current model) and also keep at least one (make of) car (current model) constantly in use as a demonstrator. For this purpose the company will allow the distributor during the currency of this agreement two cars at the maximum discount of 25 per cent. on production of evidence of registration and provided every such car is maintained in service as a demonstration car for at least 90 days. It is further provided that such cars shall count for quantity when computing the rebate to be paid to the distributor but not for any further discount, rebate, or allowance whatsoever.

The distributor herewith places a firm order with the company for (number of) (make of) cars, such cars to be accepted and paid for by the distributor immediately the company notifies him that they are ready for delivery.

5. The company shall sell to the distributor, subject to clause 19 hereof (make of) cars with catalogued equipment for delivery at the (name of make) factory, or such other premises in Great Britain as the company may determine, on the following terms:

New cars and chassis taken by the distributor will be invoiced at 22½ per cent off the current list price.

Credit notes will be issued to the distributor in respect of all new cars and chassis sold direct by the company into the distributor's territory for the difference between the distributor's discount of 22½ per cent and the actual discount allowed by the company on the invoice to the direct dealer or dealers.

At the expiration or termination of this agreement, and subject to the full observance and performance of all provisions and clauses, the company will, if the number of (make of) cars sold from the commencement of the agreement to the expiration or termination thereof has reached -----, pay or allow the distributor a further rebate of 2½ per cent off the retail price ruling at the date of invoice of new chassis and cars purchased and of which delivery has been taken by the distributor, direct dealer, or dealer under the terms of this agreement, but not including demonstration cars referred to in clause 4. The company shall deduct from the amount of such rebate whatever sums of money the company shall have paid or may be due or may become due to direct dealers and dealers in respect of cars taken either from the company or from the distributor and which collectively shall have qualified them for a higher rate of discount under the terms of the direct dealer's and dealer's agreements. The company may further deduct from the amount of the distributor's rebate any sum of money which the said distributor may owe to the company on any account whatsoever.

6. The company have also the sole selling rights for other vehicles, the sale of which is provided for under separate agreements and under different conditions and discounts. It is understood that the sale of any other vehicles is not included in this agreement, and such sales have no relation to this agreement.

7. The distributor shall affix to his premises in a conspicuous position a sign approved by the company stating that he is a distributor of (make of) cars, and shall advertise the (make of) cars effectively in the local newspapers. The total

amount to be expended by the distributor in such local newspaper advertising during the existence of this agreement shall not be less than £2 for each car estimated for in the schedule herein.

This advertising shall be exclusive (make of car) advertising, and shall not mention any other make of car. The distributor agrees to mail to the company at the end of each month printed copies of each (make of car) advertisement running during the said month, together with rates paid.

8. The distributor shall (a) not advertise or trade in the company's goods in such a way as to cause annoyance or injury to the company or to any of its duly appointed dealers; (b) instantly withdraw any advertisement on being notified by the company that objection is taken thereto, and (c) not repeat any such advertisement nor publish any form of advertisement containing matter to which the company has objected.

9. On orders for parts the distributor shall be allowed 20 per cent discount from the list prices established by the company and a further cash discount of 1 per cent provided payment is made to the company by the distributor on or before the 20th of the month following delivery. Accounts unpaid within the month following delivery to be subject to interest at the rate of 5 per cent per annum.

10. The company and its distributors may sell spare and repair parts for cars in the territory assigned hereby, but this agreement gives to the distributor no exclusive agency for the supply of such parts.

11. The company may sell its goods within the territory assigned hereby, but in the event of the company selling any new (make of) cars (current model) within the said territory (excepting sales to dealers as provided for in clauses 14, 5, and 16) the company shall credit to the distributor a sum equal to the full amount of the discount to which the distributor is entitled under this agreement less 5 per cent. The company shall count toward the full fulfillment of the distributor's obligations hereunder both as regards quantity and rebate -----, provided, always, the company reserves the right to sell or dispose of any of their motor vehicles (other than new and unused current models), demonstration, or used vehicles anywhere in the territory mentioned in clause 1 hereof, at special or clearance prices, and on the said sales the company shall not be liable to the distributor for any benefit, discount, rebate, or allowance in connection with such transactions, nor shall such vehicles count for quantity or rebate on any contract.

12. The company's guaranty on the cars supplied under this agreement shall be limited to the terms specifically stated in the company's current printed guaranty form and shall be limited to the period of six months unless otherwise specifically stated in writing signed by a responsible official of the company.

The distributor hereby agrees not to sell or offer for sale for use in connection with the company's products, whether new or secondhand, any spares or replacement parts unless such spares or replacement parts have been purchased from the company.

13. The company may make sales to companies or individuals operating a business of national scope and maintaining depots or resident representatives in the United Kingdom. On the said sales, where the car is delivered to a representative having a permanent residence in that territory assigned above, the company shall not be liable to the distributor for any benefit, discount, rebate, or allowance in connection with such transactions, nor shall such cars count for quantity or rebate on any contract.

14. The distributor shall immediately endeavor to appoint direct dealers and dealers in any town or portion of the said territory and supply them with (make of) cars upon the terms of the direct dealers' and dealers' agreements issued by the company for this purpose. The agreement for the appointment of direct dealers and dealers shall be made in triplicate on forms provided by the company and shall not be valid unless bearing the signature of a director or duly authorized official of the company. Should the distributor not, within eight weeks of the signing hereof, appoint direct dealers and dealers in areas specified by the company, the company may make such appointment of direct dealer or dealer as it deems fit, and all cars sold by the company to such direct dealers and dealers shall be considered as taken by the distributor in relief of his obligation hereunder. The distributor shall be responsible to the company for the due observance by direct dealers and dealers of all the terms and conditions of the agreement. Unless otherwise agreed in writing by the company, the distributor agrees to allot to the (make of) direct dealers and dealers in his territory their proportion of the cars allotted to him by the company.

15. The distributor shall (a) supply (make of) cars at not less than 17½ per cent discount to any person, firm, or company carrying on business as a bona fide motor agent or agents in any portion of the said territory not already assigned to a direct dealer or dealer, (b) cars shall only be supplied to any such bona fide motor agent or agents, against an order duly made out on a form supplied by the company, which states the conditions under which the company supplied such cars, and (c) be responsible to the company for the due observance by any such purchaser of all terms and conditions hereof. If the distributor shall not comply with these conditions, the company may supply direct, and any cars so supplied shall not count toward the fulfillment of the distributor's obligations hereunder both as regards quantity and rebate.

16. The company shall refer all inquiries for new cars received by it from the distributor's territory to him for his prompt attention (but inquiries for new cars from territory duly allotted to a direct dealer or dealer shall be referred to the direct dealer or dealer for attention), the distributor also being notified of such inquiries, provided only that the distributor complies with clause 4 of this agreement, otherwise the company reserve to themselves the right to handle these inquiries for their own benefit and to the entire exclusion of the distributor.

17. The property title in all cars furnished by the company to the distributor hereunder shall remain in the company until the full purchase price thereof shall have been received by the company. The company may in case of default by the distributor retake with or without process of law and permanently retain any such cars without any liability by the company to the distributor.

18. No claim regarding errors in dispatch or invoicing of goods will be considered by the company unless notification in writing be received by it from the distributor within seven days from their receipt. The responsibility of the company for any damage to cars or other goods shall cease upon delivery to the distributor, his representative, or the carrier.

19. The company does not guarantee to supply any of its goods to the distributor whether specially ordered or not, and prices and discounts are subject to change before delivery is made, in which event the distributor shall be notified and he shall have the right to cancel any so affected orders for cars or parts.

20. In the event of a reduction in the advertised list price (make of) cars and/or chassis the distributor undertakes to credit the distributor with the difference between the old and the new retail price less his discount for all new, unused, and unregistered cars held in stock by the distributor on the date of the announcement of such reduction, provided such car or cars have been purchased from the company not more than 90 days prior to the announcement of the reduction in price, provided, also, the distributor returns the declaration (supplied by the company for this purpose), and duly signed by a commissioner for oaths, to the company within 14 days of the announcement of the reduction in price. Such credit shall be deducted from the invoice of the next car purchased from the company by the distributor during the currency of this agreement.

21. The distributor shall only sell (except to bona fide motor traders carrying on business in the said territory) (make of) cars or parts at the company's current list prices plus cost of freight and delivery and without deduction for rebate allowances, donations, commissions, or otherwise. Should the distributor at any time either during the currency of this agreement or subsequently violate the conditions of this clause he shall refund forthwith to the company the full amount of discount or rebate allowed to him by the company in connection with every car so sold, but without prejudice to the company's right to terminate this agreement under clause 24 hereof.

22. All cars supplied by the company hereunder are subject to the condition that they are not to be exhibited directly or indirectly at any exhibition held in the United Kingdom without the written permission of the company other than any exhibitions held by the Society of Motor Manufacturers and Traders (Ltd.), or approved by that society for exhibition of motor goods by its bond signers, nor shall any literature be distributed at such unauthorized exhibition. The distributor shall pay to the company as liquidated damages such sum not exceeding £250 as the company in its absolute discretion shall decide for every breach of this provision.

23. The distributor shall not remove or alter the company's plate or mark affixed to any (make of) car and shall at the end of each month supply to the company a list of all cars sold by him under this agreement, including all sales to dealers, giving the serial number and description of each car sold, the date of sale, and name and address of purchaser.

24. The company may immediately terminate this agreement (a) in the event of the distributor canvassing or advertising in the territory assigned to another distributor, direct dealer, or dealer, or supplying any (make of) cars to any member of the trade or wholesale purchaser in the territory assigned to another distributor, direct dealer, or dealer, or to any shippers or merchant for export or for delivery directly or indirectly beyond the limits of the United Kingdom, and should the distributor at any time either during the currency of this agreement or subsequently violate the conditions of this clause he shall refund forthwith to the company the full amount of discount or rebate allowed to him by the company in connection with each and every car so sold, (b) if the distributor shall commit any act of bankruptcy or make any arrangement with his creditors, also in the event of any change of membership of the distributor's firm, (c) if at any time the name of the said distributor shall appear in the stop list of the motor trade association, (d) upon any breach or nonperformance by the distributor of any of his obligations hereunder, (e) if he is not diligently pushing the sale of (make of) cars or carrying the stock called for in clause 4 or working the said territory to the best advantage, (f) if the distributor shall not take any pay for the cars referred to in the schedule within the periods therein referred to (time being essential), by notice in writing addressed by registered postal letter to the distributor at his address hereinbefore mentioned, and such notice shall be deemed to be duly served upon the distributor within 48 hours after it shall have been placed in the post.

25. The distributor agrees with the company that during the period of this contract the distributor will not take the agency for or push the sale directly or indirectly of any lines of cars or chassis which, in the opinion of the company, shall be in competition with the cars, chassis, and goods herein specified within the district herein named, except with the written consent of the company first had and obtained, and in the event of the said distributor committing a breach of this clause the company shall have the option of giving the distributor a written notice to take the balance of the cars or chassis under this agreement within 30 days of such notice or in the alternative the company may cancel this agreement and any outstanding orders.

26. The company may sell a car or cars to purchasing agents or exporters living offices or residing in the territory allotted hereby, provided the car or cars in question are for export, and no discount rebate or allowance shall be due to the distributor in connection with such transaction.

27. This agreement is not valid unless signed by a director or duly authorized official of the company. No variation of this agreement shall be valid unless in writing and signed in accordance with this clause.

28. The company shall not be responsible to the distributor in respect of any breach by other distributors, direct dealers, or dealers.

29. This agreement shall not be assigned without the previous written consent of the company. The distributor is not the agent or representative of the company and has no authority to assume any obligation whatsoever, expressed or implied, on the company's behalf.

30. The words (make of) shall not be used for any corporation, company, partnership, or individuals engaged in the automobile business in any manner whatsoever without the previous written consent of the company. If the company shall consent to the use thereof by the distributor, the privilege thus granted shall cease forthwith at the termination of this agreement.

31. Upon the termination of this agreement from any cause whatsoever all liability on the part of the company shall cease.

32. This agreement supercedes all prior agreements between the parties which are terminated as from the date hereof. This agreement expires by limitation August 31, 19—, without further notice.

33. Should the company at any time during the currency of this agreement waive any of its rights under this agreement, this shall not in any way affect the validity or enforcement of any clause or clauses of this agreement.

34. Schedule of cars from date of signing hereof:

To Nov. 30	To Feb. 29	To May 31	To Aug. 31

In witness whereof the parties herunto have signed this agreement the day and year first above written.

## II. UNITED KINGDOM IMPORT DUTIES ON AUTOMOTIVE PRODUCTS

The following list shows the customs duties<sup>1</sup> payable on the importation of motor cars, commercial vehicles, etc., into the United Kingdom and the procedure with respect to drawback.

Motor cars, including motor bicycles and motor tricycles, 33½ per cent ad valorem.

Accessories and component parts therefor, other than tires, 33½ per cent ad valorem.

Tires and tubes for motor vehicles, motor bicycles, and motor tricycles 33½ per cent ad valorem.

Marine motor engines (if suitable also for motor cars) 33½ per cent ad valorem.

Engineers' hand tools free.

Tractors used for road use, 33½ per cent ad valorem.

Agricultural tractors, dutiable at 33½ per cent ad valorem. If to be used solely for agricultural purposes, they can be imported free of duty, providing the importer signs a bond containing the following conditions:

1. The importer shall keep, to the satisfaction of the commissioners, a record with respect to each tractor imported under the bond, showing the port and date of importation, the name of the importing ship, the identifying number and value declared at importation, the address where stored, the name and address of the person to whom sold, and the date of sale.

2. The importer shall produce the record at any time, on demand, for inspection by the officers of customs and excise.

3. The importer shall, within three days of the sale of any tractor entered under the bond, send a written notification to the officer in whose station the importer's premises are situated of the name and address of the purchaser and the date of sale.

4. The importer shall produce to the proper officer on demand any tractor imported under the bond with respect to which due notice of sale has not been given or which has not been accounted for to the commissioners' satisfaction.

5. The importer shall pay duty, on demand, on any tractor remaining unsold at the end of 12 months from the date of importation, or such further period as the commissioners may, in writing, have allowed.

6. The importer shall produce with respect to each tractor within three months of the date of sale, or such further period as the commissioners may in writing allow, a declaration by the actual user, made before an officer of customs and excise, that the tractor will be used exclusively for agricultural purposes and will not be run on the highway except for the purpose of proceeding from one place of operation to another.

### DRAWBACK

If it is proved to the satisfaction of the commissioners that an import duty has been duly paid on the goods, and that the goods have not been used in Great Britain or northern Ireland, a drawback equal to the amount of duty paid can be claimed on the export of the goods as merchandise.

### VALUE FOR PURPOSES OF AD VALOREM DUTY

The value of any article, for the purposes of ad valorem duty, is taken to be the price which an importer would give for the article if it were delivered, freight and insurance paid, in bond at the port of importation, and duty is payable on that value as fixed by the commissioners.

### IMPERIAL PREFERENCE

Goods which are shown to the satisfaction of the commissioners of customs and excise to have been (1) consigned from and (2) produced or manufactured in the British Empire are chargeable with duty at the rate of two-thirds of the full rate. The claim for admission at the preferential rate must be made on the

<sup>1</sup> These import duties and regulations, while correct as of Jan. 1, 1928, are subject to possible fluctuation and the statements made herein should not, therefore, be relied upon implicitly after the lapse of any considerable length of time. Up-to-date information as to foreign customs duties and regulations is obtainable upon specific request addressed to the Division of Foreign Tariffs, Bureau of Foreign and Domestic Commerce, Washington, D. C., or to any of the bureau's district offices.

import entry and supported by certificates of origin in the prescribed forms. Goods so entitled to these rates, at least 25 per cent of the total value must involve labor within the British Empire.

#### GOODS IMPORTED FOR REPAIR AND REEXPORTATION

Goods for repair and reexportation, other than those admissible by bill of store, are admitted under bond or on deposit of duty. The bond is discharged or the deposit refunded on the goods being duly produced to the officers of customs and the goods identified by them and shipped for exportation in their presence within six months from the date of entry.

#### TRANSIT AND TRANSSHIPMENT

Goods imported for transit or transshipment (that is, for immediate reexportation from another port or the same port, respectively) may go forward for exportation under bond without payment of duty.

#### BONDED WAREHOUSE

Goods may be entered for deposit in any bonded warehouse approved for such goods either at the port of importation or elsewhere. In the latter case they are removed to the bonded warehouse under the security of a bond, to be given by the importer or on his behalf, for their due production to the officers of customs and excise at the warehouse. They may be delivered from the warehouse either (a) for home use on payment of duty, or (b) for immediate exportation under bond. Repacking is allowed for exportation only, subject to certain conditions. No manufacturing operations are allowed in bonded warehouse.

#### III. IRISH FREE STATE DUTIES

Motor cars, including motor bicycles and motor tricycles, 33½ per cent ad valorem. British preferential rate 22½ per cent ad valorem.

Accessories and component parts of motor cars, motor bicycles, or motor tricycles, other than tires 33½ per cent ad valorem. British preferential rate, 22½ per cent ad valorem.

In the case of motor omnibuses and motor trucks a refund will be given of the proportion of the duty paid with respect to the chassis and accessories.

Motor ambulances and fire engines, free.  
Tires, outer covers and inner tubes, or solid, free.  
Plows, mechanical power, free.  
Tractors, agricultural or other, free.  
Motor boats free.  
Marine engines, free.

#### IV. BASIS OF TAXATION (GREAT BRITAIN)

##### DUTIES ON MECHANICALLY PROPELLED VEHICLES

1. Hackney carriages having a seating capacity for:	
Not more than 8 persons.....	£15
More than 8 but not more than 14 persons.....	30
More than 14 but not more than 20 persons.....	45
More than 20 but not more than 26 persons.....	60
More than 26 but not more than 32 persons.....	72
More than 32 but not more than 40 persons.....	84
More than 40 but not more than 48 persons.....	96
More than 48 but not more than 56 persons.....	108
More than 56 but not more than 64 persons.....	120
More than 64 persons.....	120

With an additional £1 10s for each person in excess of 54 persons excluding driver.

Where standing passengers are allowed they are taxed on the number of passengers who could be seated in the space left for standing passengers. "Hackney carriages" include taxicabs, busses, etc., or any vehicle which plies regularly for hire.

#### 2. Commercial goods vehicles (trucks) other than electrically propelled:

Not exceeding 12 hundredweight (British hundredweight=112 pounds) in weight unladen.....	£10
Exceeding 12 hundredweight but not exceeding 1 ton in weight unladen.....	16
Exceeding 1 ton but not exceeding 2 tons in weight unladen.....	26
Exceeding 2 tons but not exceeding 3 tons in weight unladen.....	40
Exceeding 3 tons but not exceeding 4 tons in weight unladen.....	48
Exceeding 4 tons but not exceeding 5 tons in weight unladen.....	54
Exceeding 5 tons in weight unladen.....	60
With an additional duty, in any case, if used for drawing a trailer, of.....	6
Exceptions to these rates are made in the case of showmen's vehicles. Specially reduced rates are allowed provided they comply with regulations as to tires, etc., to reduce road damage.	

#### 3. Road locomotives for haulage purposes only (excepting agricultural):

Up to 2 tons.....	£21
Exceeding 2 tons but not exceeding 4 tons.....	25
Exceeding 4 tons but not exceeding 6 tons.....	30
Exceeding 6 tons but not exceeding 7½ tons.....	35
Exceeding 7½ tons but not exceeding 8 tons.....	40
Exceeding 8 tons but not exceeding 10 tons.....	50
Over 10 tons.....	60

#### 4. Mechanically propelled vehicles solely for agricultural purposes:

Up to 12 hundredweight.....	10
Exceeding 12 hundredweight but not exceeding 1 ton.....	16
Exceeding 1 ton but not exceeding 2 tons.....	21
Over 2 tons.....	25
If used solely for haulage in connection with agriculture—	
Up to 5 tons.....	6
Over 5 tons.....	10
Locomotive plows and farming implements, etc.....	5s.

#### 5. Six-wheeled vehicles (articulated):

The taxation of these six-wheeled vehicles is governed by section 10 of the finance act of 1923, which reads: "Where a vehicle is used in combination with a trailer which has not more than two wheels in contact with the ground and is so constructed and by partial superimposition so attached to the vehicle that at all times the weights on the rear axle of the vehicle exceed the weight of the axle of the trailer the vehicle and trailer shall, for the purpose of determining the rate of duty chargeable under the second schedule to the finance act, 1920, but not for any other purpose, be treated as if it were a single vehicle used for drawing a trailer. This section shall come into operation on the first day of January, 1924."

#### 6. Six-wheeled vehicles (rigid):

A rigid six-wheeled vehicle has no standard for taxation in the United Kingdom as such and is treated exactly as any other commercial vehicle with four wheels. Its tax is, therefore, according to its unladen weight, irrespective of the number of wheels.

#### 7. Passenger cars:

Not exceeding 6 horsepower or electrically propelled, £6; exceeding 6 horsepower, £1 for each unit or part of a unit of horsepower.

#### 8. Electric vehicles:

Vehicles (including bicycles weighing more than 8 hundredweight unladen) constructed or adapted for use and used for the conveyance of goods or burden of any description, whether in the course of trade or otherwise—  
Being vehicles which are electrically propelled and not exceeding 25 hundredweight in weight unladen..... £6  
Exceeding 25 hundredweight but not exceeding 2 tons in weight unladen..... 13  
Exceeding 2 tons but not exceeding 3 tons in weight unladen..... 20  
Exceeding 3 tons but not exceeding 4 tons in weight unladen..... 24  
Exceeding 4 tons but not exceeding 5 tons in weight unladen..... 27  
Exceeding 5 tons in weight unladen..... 30  
With an additional duty, in any case, if used for drawing a trailer, of..... 6

## LICENSING

A license may be taken out with respect to any mechanically propelled vehicle (other than a tramcar or a vehicle on which a duty of 5s. is chargeable under this section). For any period less than one year expiring on December 31 at a rate of one-twelfth of the full annual duty for each month plus 5 per cent. For one-quarter of the year only beginning on January 1, March 25, July 1, or October 1, and in the case of any license so taken out, the duty shall be  $27\frac{1}{2}$  per cent of the full annual duty. In the case of licenses taken for less than a quarterly period but ending at the expiration of the quarterly period the rate for two months is two-thirds of quarterly rate and for one month one-third of quarterly rate. In the case of motor cycles no period less than one quarter will be issued at a rate of  $27\frac{1}{2}$  per cent of full amount.

## SURRENDER OF LICENSES

When a license is surrendered before period of issue has elapsed, a refund will be made for each completed month unexpired. Quarterly licenses one-third of duty, annual licenses one-twelfth of duty, both subject to a fee of 5s. in the case of a cycle and 10s. for other vehicles.

## DEFINITIONS

*Unladen weight.*—"Relating to the use of vehicles on roads, the weight, unladen, of any vehicle shall be taken to be the weight of the vehicle inclusive of the body and all parts (the heavier being taken where alternative bodies or parts are used) which are necessary to or ordinarily used with the vehicle when working on a road, but exclusive of the weight of water, fuel, or accumulators (other than boilers) used for the purpose of propulsion and of loose tools or loose equipment:

"Provided that, in the case of a vehicle which weighs more than  $7\frac{1}{4}$  tons and is specially constructed so that all or part of the superstructure is a permanent, or essentially permanent, fixture, and the axle weights of which do not exceed the maximum axle weights prescribed under the motor car act, 1903, or any act amending that act, the weight unladen of the vehicle shall be deemed to be  $7\frac{1}{4}$  tons."

*Horsepower.*—"The square of the internal diameter of the cylinder in inches, multiplied by the number of cylinders, and divided by 2.5—treasury rating."



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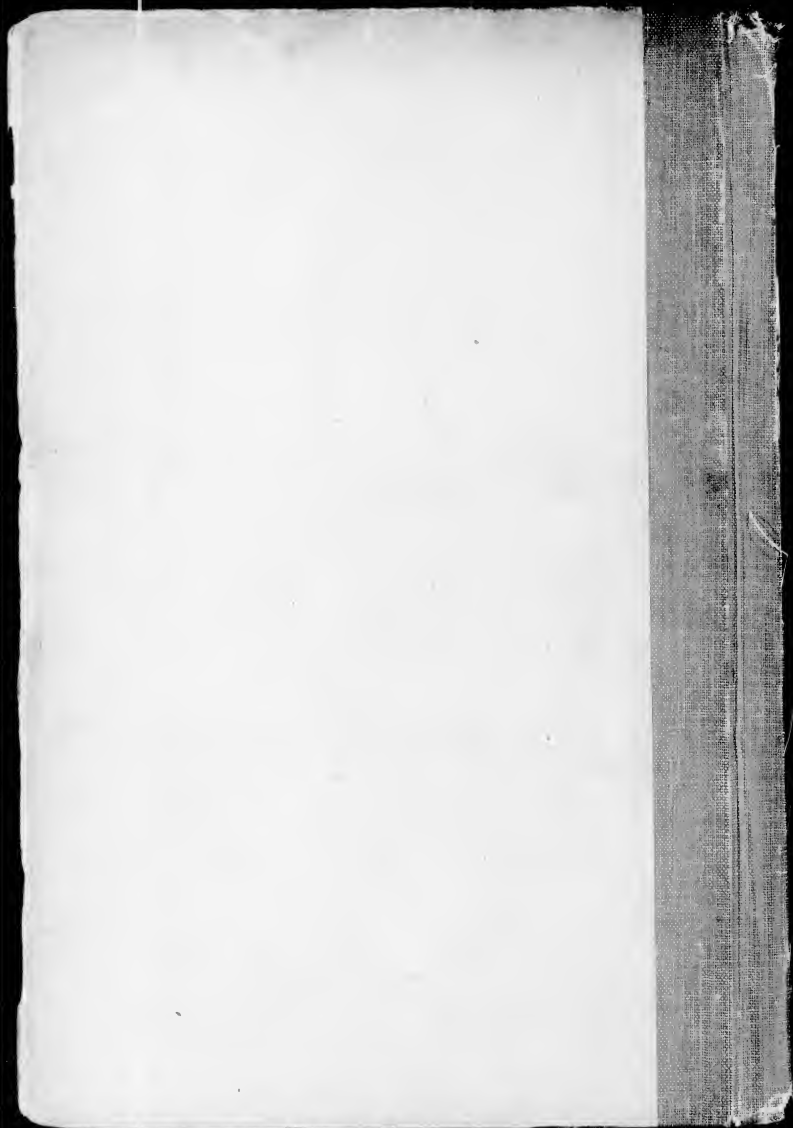
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